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ABSTRACT

To determine whether an individualized approach to learning would help overcome the problems of crowded student schedules, heterogeneous ability groupings, and inexperienced teachers, 110 freshmen and sophomore students in a community college nursing program were divided by grade level into two control groups which received traditional lectures, and two experimental groups which received taped lectures and small seminars. Though analysis of pretest and posttest scores did not indicate that the individualized approach resulted in significantly higher achievement levels, the achievements were as good as the traditional approach. As a result of the findings, it was recommended that the individualized approach be expanded to include all nursing courses, and that a listening laboratory be established for the nursing program with carrels, tape recorders, and film projectors. Several course outlines and study instruments and materials are appended. (SB)

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A STUDY TO EVALUATE THE EFFECTIVENESS
OF AN INDIVIDUAL STUDY APPROACH TO
ASSOCIATE DEGREE NURSING

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July, 1970

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HEALTH, EDUCATION, AND WELFARE
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INTRODUCTION

Summary

This study was undertaken to determine whether an innovative instructional strategy would help to overcome the problems of crowded student schedules, heterogenous ability groupings, and inexperienced instructors, in a community college's nursing program. The innovative instructional strategy was essentially a more individualized approach to learning. The approach involved self-initiated learning through taped lectures, teacher-made workbooks, and small group discussions. To assure increased student participation, the small group sessions were restricted to fifteen students or less.

This innovative strategy was initiated in order to provide a basis for comparing the level of achievement among students who experienced the traditional (lecture) approach with the level of achievement among students in the more individualized group.

The specific objectives of this study were:

1. To ascertain what difference, if any, resulted in the levels of achievement among students when an individualized approach to instruction and a traditional lecture process (currently used in El Centro College's Associate Degree nursing program) are compared.
2. To determine whether different instructional treatments resulted in different levels of achievement among nursing students at different stages in their academic career (freshman vs. sophomores).

Statistical tests of the results of the study indicated that the students in the experimental (individualized learning) group performed as well as students in the control (lecture) group. Of the seven comparisons of achievement between the experimental and control groups, none indicated that different treatments resulted in increased performance.

Although the statistical evidence did not indicate that the individualized approach to instruction resulted in significantly higher achievement levels among the nursing students, it did indicate that the achievement results were as good as the traditional approach. This evidence, plus

other desirable features of the experimental teaching strategy (greater student participation, faculty improvement, less rigid student schedules, and increased student motivation) resulted in the decision to convert El Centro College's entire instructional program in A.D. Nursing to this more innovative approach.

BACKGROUND OF THE STUDY

El Centro College is an inner-city campus of the Dallas County Junior College District, and has an enrollment of 7,500 students. It is a comprehensive two-year college which offers transfer, vocational-technical and community services programs. The Associate Degree nursing program enrolled its first class in the fall of 1966 when the college began its operation.

The faculty of the Associate Degree nursing program identified the following areas of concern which led them to undertake this study.

A. Increasing Enrollment

The Associate Degree nursing program enrolled twenty-six students in 1966 and fifty-six in 1967. It was not until the third year that the program enrolled the optimum number of students that were originally anticipated. In the fall semester of 1968, 117 students were accepted in the freshman class. Of this number, ninety-nine registered.

During the 1968 school year the sophomore class consisted of twenty-six students. Because the drop-out rates for nursing programs in open door colleges tend to be extremely high, the nursing faculty decided to investigate several approaches which might help to overcome the serious problem of attrition.

One conclusion reached by the staff was that the increasing class enrollments were reducing the faculty's ability to identify the needs of individual students, thereby reducing the number of students who could be expected to successfully complete the program. During the first three years of the program, the student enrollment increased 330 per cent, while the nursing faculty had increased from four to nine, or 225 per cent. The instructor-student ratios went from 1:9 in 1966 to 1:16 in 1968.

B. Lack of Teaching Experience in Faculty

In addition to overcoming the problem of depersonalization

within the program because of increased faculty-student ratios, an equally serious problem was that of obtaining experienced, qualified faculty. At the beginning of 1968-69 academic year, the faculty consisted of the following:

Two individuals with Master's Degrees in nursing, and prior teaching experience.

Three instructors with Bachelor's Degrees, each of whom had received his entire teaching experience at El Centro College (a cumulative total of three and one-half years of teaching experience for the three instructors).

Four new instructors with four-year degrees, sound field experience, but no teaching experience.

In order to minimize the program of utilizing instructors with little or no teaching experience, the staffing pattern employed in the A.D.N. Division was structured to allow each new, inexperienced faculty member to have one academic year completely free of required classroom teaching. During this first year of employment, the inexperienced instructor was expected to develop his clinical guidance and pre and post-clinical conference skills. In addition to this, each new instructor was allowed to undertake any unit of classroom teaching which seemed appropriate to him. The new instructor was required to audit the lectures presented by the experienced instructor, which were related to his clinical laboratory assignment.

Emphasis was given to improving classroom teaching skills during the second year of employment in the A.D.N. Division by providing released time from clinical laboratory assignments. This afforded each second-year instructor greater time to prepare his classroom teaching materials. Although inexperienced faculty do not generally fear the pre and post-clinical conference setting, full-time classroom teaching responsibility is often very difficult for the inexperienced instructor.

C. Qualifications of Applicants

In analyzing the problems facing the A.D.N. program, the faculty noted that there were great variations in the grading scales used in the local feeder high schools. De facto segregation patterns in the areas accentuated the difficulty in interpreting the meaning of the grades recorded in the high schools.

In addition to these problems, it was found that many older and more mature students had returned to school after a lapse of time, and new study habits had to be developed in order to meet the program requirements. These factors, plus the "open door" admissions policy, forced the staff to cope with the problem of heterogenous ability groupings throughout the entire program.

D. Academic Load for Students

Revisions of the manual of Texas' State Board of Nurse Examiners allowed the required number of credits for graduation to be reduced to seventy-five (with an average classroom, laboratory, and study demand of forty-eight hours per week). The fact that eighty-three percent of the students had household responsibilities and/or were employed from sixteen to forty hours per week, made it obvious that the student had little or no time to engage in the campus activities during the school day. Because of this situation, the faculty concluded that greater flexibility in academic scheduling was necessary, if these activities were to be afforded the student of the Associate Degree Nursing.

The above areas of concern caused the faculty to seek a new approach which would help to overcome these problems.

RATIONALE FOR THE INDIVIDUAL STUDY PROGRAM

The faculty's investigation into a more innovative approach to the A.D. Nursing program resulted in the development of an individual study approach which was used in two courses (Fundamentals of Nursing, Nursing 132, and Medical-Surgical Nursing, Nursing 232). The rationale for adopting an Individual Study Approach was based on the following assumptions:

1. The individual study approach provides the inexperienced instructor an opportunity to avail himself of the lecture materials presented by the more experienced area specialist, allowing for necessary clarification before meeting with his students. This increased the instructor's grasp of the material, improved his ability to work in the laboratory setting; and thereby served as a vital in-service experience for the new instructors.
2. The individual study approach also provided a needed flexibility

in preparing the students' schedule. Students enrolled in Associate Degree Nursing normally carried eighteen credit hours (including two laboratory assignments which have a ratio of three lab hours for one credit). By providing more flexible scheduling of classes, each student was able to arrange his free time to engage in the social and cultural activities of campus life.

3. The individual study approach also increased the individual contact between the instructor and the student. In the traditional setting, the typical enrollment was from fifty to one hundred students in each lecture class. In these larger sections, usually the high and low achiever received most of the instructor's attention, while the students comprising the middle range of a large class often receive little individual attention. Since the individual study approach utilized a seminar approach with no more than 15 students, the individual student needs could be more adequately identified and met. In addition to this, the slow learner could repeat his individual study assignment according to his needs.
4. The individual study approach also allowed each of the students to progress at his own rate, and it minimized the problem of rigid class attendance.

TRADITIONAL AND EXPERIMENTAL COURSES (IMPLEMENTING A RESEARCH DESIGN)

After identifying the specific problems and developing a rationale for initiating an individual study approach, the nursing staff decided to evaluate the result of the more innovative approach, by comparing the performance of the students in this program and those enrolled in the lecture classes. In order to compare the levels of performance, the freshman class and the sophomore class was divided into two groups. One-half of each class was assigned to a class taught in the "traditional" manner (control group) and the other half was assigned to the individual study (experimental) group.

A. The Traditional Courses

Fundamentals of Nursing, an introductory course for freshmen, had utilized a rather typical lecture format. This was a six semester hour course which involved theory and clinical laboratory experience.

During the first year of the nursing program, the freshman students had met in groups of not more than 27 students. During the second year, the class sizes had grown to 56. The typical instructional procedures in this course allowed the area specialist to present the material in a traditional classroom lecture method and provided time for student questions at the beginning and end of the class period. Students were expected to have read the assigned material before attending the theory classes. Students were evaluated by their performance on quizzes administered throughout the semester, and a mid-term and final examination.

The laboratory experience in the freshman course required nine hours per week of patient care in a local hospital throughout the semester. There was no campus laboratory. All of the laboratory experience was oriented to direct patient care.

Sophomore students were enrolled in Medical-Surgical Nursing, an eight-week course which included two hours of theory and three semester hours of clinical laboratory credit. The two hours of credit allocated to theory involved four hours of classroom lecture each week for eight weeks. The three credit hours for laboratory experience required eighteen hours per week of patient care on the medical or surgical units of local hospitals for the eight-week period. The Medical-Surgical theory classes for the second-year students followed the same general format as the freshman classes. The instructional procedure was the lecture and the evaluation of performance included the same kinds of examinations.

Instructors, who were inexperienced and/or new to the A.D.N. program, were requested to audit the lecture series associated with their clinical assignment.

B. The Experimental Courses

The Individual Study Approach

- (1) All of the course content was presented through taped lectures. (See Appendix I.)
- (2) Throughout the course, the students met in seminars which enrolled no more than fifteen (15) students. One instructor was assigned to each small group session and these sessions met for one-half the required classroom time per week, as the traditional group. The sessions allowed greater freedom among the students and encouraged group discussion.

- (3) The Individual Study Approach also utilized the syllabi prepared for the Fundamentals of Nursing and the Medical-Surgical Nursing courses. (See Appendices I and IV.)
- (4) The Individual Study Approach was based on the formulation of behavioral objectives for each unit in the two courses. (See Appendices II and V.)

After structuring these two instructional approaches to allow for comparison of performance, it was possible to determine if either treatment resulted in a significant difference in achievement. The following section of this report presents the results of this research design.

DEFINITION OF TERMS

Area Specialist: Nurse instructor who has special experience and/or preparation in a specific area within a given course in nursing theory, such as electrolyte imbalance, or metabolic disorders, pediatric nursing.

Central Lecture Series: Audio tape recordings of the theoretical information necessary to a course in nursing and representing the monologue phase of the Individual Study Approach.

Individual Study Approach: A prescribed program of education carried on with limited direct guidance from the faculty.

Small Group Sessions: The meeting together of an instructor and 10 to 15 students currently enrolled in the course, for the purpose of clarification and exploration of the topic of the week and representing the dialogue phase of the Individual Study Approach.

Tape Block: A portion of the weekly lecture series which contains related materials not to exceed twenty minutes of lecture, and available to the student in the Instructional Media Center between the hours of 8 A.M. to 9 P.M. Monday through Thursday, and 8 A.M. to 4 P.M. Friday.

Traditional Lecture Method: One instructor meeting with groups of students at specified times for the purpose of presenting data necessary to the course.

STATISTICAL ANALYSIS AND FINDINGS

PROCEDURE

A. Research Design

This project was designed to determine whether there was any significant difference in achievement among students enrolled in a course which encouraged an individualized learning approach and students enrolled in a course which was presented in a traditional manner. More specifically, the project was designed to ascertain whether different instructional strategies (self-initiated learning vs. traditional lecture) resulted in a real difference in the academic performance of freshman and sophomore level courses, in order to determine whether the lecture or the individualized instructional strategy resulted in better performance by students at different stages in their academic development.

Students at each level in the nursing program (freshman and sophomore) were randomly assigned into experimental and control groups. The freshman control group and the sophomore control group covered the same course material as the experimental groups for each class level. The groups received different treatments by having the course content presented in a different manner. The control group had the material presented in the conventional lecture format which had been used in previous semesters; the experimental groups had the same material presented through the use of taped lectures and small discussion groups.¹

In order to minimize the differential effect of the teacher variable, it was required that the taped presentation be prepared by the same instructor who gave the lectures to the control group. In this way, the experimental group and the control group experienced the same instructor throughout the entire semester.

B. Description of the Sample

A total of eighty-four freshman students and twenty-six sophomore students were involved in the study. Although a

¹The procedure for disseminating and discussing the course material has been described in greater detail in a previous section of this report.

larger number of freshman students originally registered for the introductory course (ninety-nine), only eighty-four of these students enrolled and completed the course. All of the original sophomore registrants enrolled and completed the experimental or the traditional course for that level.

The students who participated in this research project were enrolled in the A.D. Nursing program at El Centro College. Freshman participants were all enrolled in an introductory course entitled Fundamentals of Nursing 132. Sophomore participants were enrolled in a Medical-Surgical Nursing course. Students who enrolled in the freshman course and students who enrolled in the sophomore course were divided into control (traditional lecture) and experimental (central lecture series) groups by a random selection procedure.

In assuring a random selection for the control and experimental groups in each course, the Social Security number was used as a sorting tool. Students whose Social Security number ended in an even number were assigned to the experimental groups. This procedure resulted in the following distribution:

Freshman experimental group	N = 41	(Research group)
Freshman control group	N = 43	(Traditional group)
Sophomore experimental group	N = 14	(Research group)
Sophomore control group	N = 12	(Traditional group)

C. Description of Performance Criteria

1. Pre-test: In order to determine whether the students assigned to the control or experimental groups had prior knowledge of the subject matter to be covered in the course, a pre-test was administered. Essentially, the pre-test sampled from the content of the course. By having this information, it was possible to assess the background knowledge of the individual student and to compare the relative level of prior knowledge within each group. In addition to this, the pre-test established a base line which could be used to evaluate more accurately the progress of the students throughout the course.
2. Post-test: A post-test was administered to all of the participants. Essentially, this was a comprehensive, objective final examination. This test evaluated the student's knowledge of the subject matter covered throughout the semester

and served as one criterion for achievement in the course. Identical post-tests were administered to the experimental and control groups for each level (freshmen and sophomores). The post-test was also used as one of the four indices which determined the final letter grade in the course.

3. Final grade: The final grade which was assigned to each student was also evaluated as a criterion of achievement in each course. The four elements which contributed to the final grade were weighted in the following manner:

Daily Quizzes	12 per cent
Mid-term Examination	24 per cent
Final Examination	24 per cent
Clinical Laboratory Grade	40 per cent

Since the final grade was calculated in this manner, sixty per cent of the grade reflected the results of objective tests. Forty per cent of the final grade was based on the more subjective criteria of clinical experience.

D. Assumptions

In interpreting the results of this study, it is important to point out that the following assumptions were made:

1. That there was no significant difference in the ability levels between control and experimental groups at the freshman level or the sophomore level. (No standardized instrument was administered to the students to control for ability.)
2. That content provided in the traditional courses (control group) was as nearly identical to the content prepared for the central lecture series (experimental group) as is possible in different instructional settings.
3. That "coaching" or teaching the criterion tests did not occur.
4. That the instructor-prepared pre-tests, post-tests, and final grades were a sound criteria of student performance.
5. That students in the control groups and students in the experimental groups spent approximately the same amount of time in learning the material.

6. That factors outside of the specific classroom and clinical experiences (related courses, personal problems, overload, etc.) did not significantly influence student achievement in the courses during the semester.

E. Limitations

Research projects which attempt to discern whether one teaching strategy produces greater achievement than another must always be examined with the following limitations in mind:

1. Teacher personality, temperament, and instructional style is always operating as a variable which may be significantly influencing the performance of students in a positive or negative way. It is impossible to control for the interactive effect of the teacher variable. Even if a conscious effort is made to make identical presentations to different groups, it is impossible to assume that such a duplicate presentation really occurs.
2. Even though maximum effort was made to make the content presented to the control group as similar as possible to the content presented to the experimental group, other factors in the classroom setting may cause subtle variations in the material presented to a student group. Question and answer sessions, clarifying responses, and repetition by the teacher in a live presentation may cause important differences in emphasis and content organization when compared with a taped presentation of the same material.
3. Experimental control of the study was reduced since students in the experimental group interacted with different instructors in the small group sessions. The results would have been more reliable if the students in the control and experimental groups had experienced a common instructor for the entire instructional program. By allowing small groups of students to meet with different nursing instructors, the study introduced an even greater possibility of teacher variables affecting the results.

STATISTICAL TREATMENT OF THE DATA

A. Method of Analyzing the Results

The statistical procedures used in this study were selected in order to provide a comparison of the achievement data between

the experimental and control groups. Analysis of the results of the pre-test, post-test, and final grades for the freshman and sophomore classes was done by determining the significance of the difference in the means ("t" test). It was pre-determined that the investigator would use the .01 level of significance on all tests. The "t" test allowed the investigator to determine whether there was a significant difference in the mean scores achieved by the experimental and control groups and to determine whether resulting differences could be accounted for through the experimental or traditional treatment of the groups. The summary of the statistical treatment of the data has been grouped according to class level.¹

B. Analysis of the Achievement Data for the Freshman Class

1. Pre-test data

The following table indicates the results of the "t" test for the freshman pre-test:

	N	$\bar{x}$	σ	σ^2
Fresh. Research Group	41	53.2	7.86	61.81
Fresh. Traditional Group	43	51	7.53	56.73

t = 1.31 not significant at the .01 level
df = 82

A comparison of the mean scores achieved by the research and traditional groups revealed that the groups were quite similar with regard to prior knowledge of the subject matter. Although the mean of the research group was slightly higher than the traditional group (2.2), this difference was not statistically significant.

2. Post-test data (Final Examination)

	N	$\bar{x}$	σ	σ^2
Fresh. Traditional Group	43	74.3	9.53	90.82

¹ In discussing the statistical treatment of the data, the term traditional group is used interchangeably with control group. The term research group is used interchangeably with experimental group (or central lecture series).

2. (Cont'd.)

	N	$\bar{x}$	σ	σ^2
Fresh. Research Group	41	69.5	7.73	59.76

t = 2.539
df = 82

not significant at the .01 level

Comparison of the mean scores on the final examination indicated that the students who were enrolled in the experimental course scored an average of 4.8 points lower than the control group. However, a statistical comparison of these means indicated that this difference was not significant at the .01 level.

3. Final Grade

	N	$\bar{x}$	σ	σ^2
Fresh. Research Group	43	2.0	.70	.490
Fresh. Traditional Group	41	2.2	.41	.168

t = 1.63
df = 82

not significant at the .01 level

When the final grade was used as the achievement criterion, students in the traditional course scored slightly higher than the research group (.2)¹. This difference was quite small and statistical analysis revealed that this was not significant at the .01 level.

C. Analysis of the Achievement Data for the Sophomore Class

1. Pre-test data

	N	$\bar{x}$	σ	σ^2
Soph. Traditional Group	12	50.5	17.25	294.46
Soph. Research Group	14	42.1	17.00	289.0

t = 1.25
df = 24

not significant at the .01 level

¹In computing the mean for the letter grades assigned to the students, the following scale was used:

A = 4 D = 1
B = 3 F = 2
C = 2

The pre-test which was administered to the sophomore control and experimental groups yielded means of 50.5 and 42.1 respectively. However, this difference was analyzed and was not significant at the .01 level.

2. Post-test data (Final Examination)

	N	$\bar{x}$	σ	σ^2
Soph. Traditional Group	12	61.3	11.85	140.04
Soph. Research Group	14	60.0	8.26	68.23

$t = .319$ not significant at the .01 level
 $df = 24$

The difference in the post-test scores for the control and experimental groups was very small. A comparison of the means indicated that the difference was not statistically significant.

3. Final Grade

	N	$\bar{x}$	σ	σ^2
Soph. Traditional Group	12	2.25	.375	.140
Soph. Research Group	14	2.45	.558	.311

$t = 1.09$ not significant at the .01 level
 $df = 24$

When the letter grade means for the experimental and control groups were compared, it was found that the average grade assigned to the research group was higher than the traditional. The difference in the mean scores (.20) was not significant at the .01 level.

D. Analysis of the Combined Freshman and Sophomore Class Data According to Experimental or Traditional Treatment of the Groups

	N	$\bar{x}$	σ	σ^2
Traditional Group	55	71.4	9.58	91.78
Research Group	55	67.0	8.51	72.42

$t = 2.54$ not significant at the .01 level
 $df = 108$

In order to assess whether differential treatments yielded a significant difference in achievement for both class levels, post-test scores for freshman and sophomore students in the control group and post-test scores for freshman and sophomore students in the control group and post-test scores for freshman and sophomore students in the experimental group were combined and analyzed. Such a grouping indicated that students in the individualized program had a mean score of 67.0, while students in the lecture program had a mean of 71.4. Statistical comparison of these means indicated that such a difference was not significant at the .01 level.

IMPLICATIONS AND CONCLUSIONS BASED ON THE STATISTICAL ANALYSIS OF THE DATA

Freshman Level

1. The pre-test for the freshman class indicated that there was no significant difference in prior knowledge of the course content between the experimental and control groups. Although this test could not be used to control for ability, it did indicate that both groups started with approximately the same background information.

2. The post-test (final examination) revealed that there was no significant difference in the terminal performance of the freshman control and experimental groups. Although the mean for the traditional group was higher, this difference was not statistically significant. It is possible that even this small difference in the groups could be explained by the fact that this was the first time that the individualized study approach had been utilized by the instructors.

3. The difference in the means of the final grades for the freshman control and experimental groups was also not statistically significant. Letter grades are not generally regarded as the most desirable criterion of academic achievement, especially when subjective factors are used by instructors to determine the final grade (e.g. clinical experience). In this particular case, no significant difference was found between the mean grade for each group.

Sophomore Level

1. No significant difference was found in the average scores earned by the experimental and control groups on the pre-test. Both groups apparently began the course with relatively the same knowledge

of the specific material to be covered in the course. However, the fact that the experimental group started lower and finished the course with approximately the same average score as the control groups did indicate a trend toward improved performance.

2. Achievement scores on the post-test did not indicate a significant difference in the performance of the two sophomore groups. Although the difference in the mean scores indicated that the control group was 8.5 points higher than the experimental group at the beginning of the course, results of the final examination indicated that the mean scores of the experimental group were approximately the same as the control group by the end of the course.

3. A comparison of the final grades for the sophomore experimental and control groups also indicated no significant differences. Both groups' grades averaged slightly above a "C" average and no discernible pattern was evident when letter grades were used as a criterion.

Combined Groups

When the freshman and sophomore students' final examination (post-test) scores were combined according to experimental and traditional treatments (rather than class level), the data still did not indicate that there was a significant difference in achievement between groups. Although the mean for the traditional group was 4.8 points higher than that of the experimental group, analysis of the data did not reveal that either treatment produced significantly higher achievement than the other.

Conclusion

Based on the statistical analysis discussed above, one must conclude that the present study did not produce any definitive evidence that the individualized study approach produced significantly higher achievement than the lecture approach which had been used in earlier semesters. In fact, an examination of the statistical information did not indicate that there was even a trend in this direction. Attempts to delineate significant differences in the measured performance between the experimental and control groups indicated that the students accomplished about the same level of mastery of course content in either instructional program. However, the decision to change from one instructional strategy to another cannot be based strictly on measurable achievement data. There are many extenuating factors which must also be evaluated before deciding whether to change an instructional program from a formal lecture approach to a more individualized learning approach (e.g. student motivation, student participation,

staff flexibility, facilities, media and equipment, etc.). In this particular study, the research did not produce statistical evidence which pointed toward one strategy leading to more efficient learning conditions nor significantly greater achievement over the other. On the other hand, the study did indicate that the individual study approach resulted in approximately the same level of terminal performance in the two nursing courses.

This evidence, when combined with other desirable features of the individual study approach, provided the impetus for converting El Centro College's nursing program to a system of individualized instruction. The rationale for this change is discussed below. (See Appendices XII.)

CONCLUSIONS AND RECOMMENDATIONS

1. There was no significant difference in the achievement between the Central Lecture Series group and the traditional lecture process or between the first and second year students in this study. Students with weak academic backgrounds tended to spend more minutes listening to tapes and the facility of replaying tapes was generally considered advantageous by a majority of the Central Lecture Series group. The workbook was considered by students to be an aid to learning.
2. Area Specialists agreed that preparation of materials for the taped lectures improved delivery in the traditional classroom setting. Instructors with little or no previous classroom teaching experience agreed that the Small Group Sessions produced much less anxiety than did the presentation of a lecture to a larger group.
3. Students enjoyed the flexibility afforded by the freedom to engage in certain classroom activities at any time during the day or evening. They expressed an advantage in the availability of the lecture material when absence from school for one or more days was necessary.
4. Faculty members expressed a reduction of tensions in the small group setting as opposed to the large class setting.
5. Both students and faculty found it easier to identify and correct individual learning needs in the S.G.S. setting.

RECOMMENDATIONS

Based on the findings of the above study, it was recommended that:

1. The Central Lecture Series be expanded to include all nursing courses.
2. A listening laboratory be established for the nursing program with carrels, tape recorders, and film projectors.
3. One set of tapes for each course be made available for each ten (10) students enrolled in a nursing course.
4. The project be repeated using the above-mentioned listening laboratory in which mechanical difficulties would be minimized.

APPENDIX

APPENDIX I

NURSING 132
FUNDAMENTALS OF NURSING
SYLLABI

TO THE STUDENT

This booklet is the course outline for Nursing 132. It contains the assignment sheets which list the topics, vocabulary, and required reading for each week.

This outline will serve as a guide and will give an overview of the course requirements. It is expected that you will have read the assigned reading before coming to class. Time will be allotted at the beginning of each class for you to present unanswered questions that arose as you studied.

EL CENTRO COLLEGE

A. D. Nursing 132

Overview

Care of the ill requires of the nurse several abilities if safety and comfort are to be assured for the patient. Each nurse and patient brings to the situation varied backgrounds that causes each to respond to the other in a given way.

We will assist the nurse to increase his ability in the manual, communicative, and observational skills; and at the same time, we will encourage each individual to retain the unique qualities he brings to the program. In return we expect the student to respect the individuality of the patient.

Two major concerns are a part of the thought behind each action of the nurse. Is this action being carried out in a manner which insures safety to the patient? Is this action being carried out in a manner which provides the greatest possible comfort to the patient?

Two words will become a part of each successful student's study pattern. These words are "How" and "Why." As he reads the student will increase his understanding as he tries to reason through these queries as he studies in this field. Questions which are unanswered should be brought to class to be shared in discussion. Along with the skills you learn and practice you will be involved in a new language. To some it will be a foreign language. To help you with this area of your learning a vocabulary list accompanies each assignment. A good student will have a dictionary beside his textbook and look up any unfamiliar word. Practice saying the new word and use it in the classroom.

Today you begin a program of study which will continue until you retire from the field of nursing.

The objectives of this course are to help the student develop:

a beginning concept of the role of the R.N. as described in our philosophy.

a beginning ability to meet some simple nursing situations.

a beginning familiarity with the hospital environment.

an ability to employ the problem solving approach to nursing care.

a knowledge of classifications of drugs.

a beginning concept of medical and surgical asepsis.

an increasing skill in communication.

an increasing skill in body mechanics.

METHODS AND PROCEDURES

There will be three hours of lecture-discussion and nine hours of laboratory practice per week. All the laboratory practice after the second week of the semester is in the hospital setting. Teaching methods include lecture, discussion, demonstrations, return demonstration and practice, oral and written reports, role playing, various clinical work sheets, and individual conferences.

GENERAL EVALUATION METHODS

Frequent unannounced 10 minute test to cover old material or reading assignment for the day.

Mid-term examination and final examination.

Check list kept by instructor on each student assigned to her.

Quality of classroom contributions.

Continual efforts are made to encourage students to engage in self-evaluation.

Evaluate against objectives.

OVERALL FACILITIES

Classroom discussions.

Clinical laboratory with selected patients to meet the needs of the student.

Weekly conferences with individual students - use of check list of critical incidents.

Pre and post clinical laboratory practice conferences with student group.

Review of all tests or examinations given.

Reading assignments.

Suggested reading list.

ASSIGNMENTS

WEEK 1 -- Principles of Nursing Care and the Problem Approach

Topic

1. Needs of Man in Health and Illness
2. Guiding Principles of Care - Individuality
Physiological Functions Disease Prevention
3. Role of the R.N.
4. Review of the "21 Nursing Problems"
5. Problem Solving Approach
 - a. Identify the problem
 - b. Research the problem
 - c. Formulate hypothesis
 - d. Test hypothesis
 - e. Evaluate

Vocabulary

Acute Disease	Morbidity rate
Chronic disease	Mortality rate
Disease	Nursing
Endemic	Physiologic
Epidemic	Principle
Health	Procedure
Hygiene	Psychologic
Hypothesis	Psychosocial
Insecticides	Rehabilitation
	Technical

Assigned Reading: Fuerst and Wolff, Fundamentals of Nursing, 3rd Ed., pp. 3-51; 129-134
McClain and Gragg, Scientific Principles in Nursing, 5th Ed., pp. 3-8, 45-53

WEEK 2 -- Principles of Medical Asepsis

1. Direct and indirect transfer of disease.
2. Methods of disinfection and sterilization.
3. Cleansing agents
4. Hand washing - principles and techniques
5. Staphylococcal infections.
6. Principles of isolation techniques

Vocabulary

Italic and heavy black words of the reading assignment.

Assigned reading

Fuerst and Wolff, Fundamentals of Nursing, 3rd Ed., pp. 55-82; 563-567.
McClain and Gragg, Scientific Principles in Nursing, 5th Ed., pp. 105-113.

Laboratory Experience

Communications: Role Playing
Hospital Orientation

WEEK 3 -- Principles of Providing a Recuperative Environment

Topics

1. The hospital physical facility
2. Nightingale's attitudes toward lighting, ventilation, and temperature.
3. Maintaining human dignity
4. Observational requirements
 Mental
 Physical
5. The patient's chart

Vocabulary

Defecation
Feces
Hyperhydrosis
Mental acuity
Micturation
Prosthesis
Sensorium
Sign
Symptom

Assigned Reading:

Fuerst and Wolff, Fundamentals of Nursing, 3rd. Ed., pp. 111-123; 135-163.
Weaver, Programmed Mathematics, pp. 3-30 should be completed
McClain and Gragg, Scientific Principles in Nursing, 5th Ed., pp. 114-139; 54-63.

Laboratory Experience

Orientation to patient's unit and chart
Follow patient to other services
Patient communication

WEEK 4 -- Principles of Communication
(Exam)

Topics

Verbal
Non-verbal
Cultural influences on communications
Spiritual needs of patients
The need for diversion
The need for mental activity
The learning process
Teaching methods

Assigned Readings

Fuerst and Wolff, Fundamentals of Nursing,
pp. 202-257

McClain and Gragg, Scientific Principles in
Nursing, 5th Ed., pp. 31-44.

Laboratory Experience

Unit Care, Unoccupied Bed

WEEK 5 -- Principles of Observations

Topics

Vital signs
Temperature
Pulse
Blood Pressure
Respirations

Vocabulary

Anoxia	Hypo-hypertension
Arrhythmia	Hyposia
Attitude	Lysis
Bradycardia	Pulse pressure
Cardinal symptoms	Recreation
Crisis	Sphygomanometer
Cyanosis	Stethoscope
Diastolic pressure	Systolic pressure
Dyspnea	Tachycardia
Febrile	Vital signs

Assigned Readings

Fuerst and Wolff, Fundamentals of Nursing,
pp. 164-187

McClain and Gragg, Scientific Principles in
Nursing, pp. 205-230

Laboratory Experience

Occupied Bed Care

Obtaining and Recording Vital Signs Readings

WEEK 6 & 7 -- Principles of Meeting Personal Hygiene Needs
During Illness

Topics

1. Nutrition and meal service
2. Rest and activity (ambulation)
3. Skin, hair, tooth and nail care
4. Elimination, urinary
5. Positioning of patients
6. Moving the helpless patient

Vocabulary

Absolute bed rest	Defecation
Ambulate	Dehydration
Bladder	Feces
Body mechanics	Lacrimal
Commode	Lavage
Contracture	Micturition
Decubitus	Pediculosis

Assigned Readings

Fuerst and Wolff, Fundamentals of Nursing,
pp. 261-361
Weaver, Programmed Mathematics, pp. 31-63 should
be completed
McClain & Gragg, Scientific Principles in Nursing,
pp. 142-178

Laboratory Experience

Patient and Unit Care as related to the 21 Nursing
Problems.
Care of Patient in Isolation may begin here.

WEEK 8 -- Principles of Management of Intestinal Elimination

Topics

1. Overview of Gastrointestinal anatomy and physiology
2. Abnormal physiology
3. Principles of therapeutic approaches to 2.

Vocabulary

Anus	Illeum
Appendices	Illium
Cathartic	Laxative
Constipation	Omentum
Diarrhea	Peristalsis
Distention	Peritoneum
Enema	Rectum
Flatulence	Sphincter

Assigned Reading

Fuerst and Wolff, Fundamentals of Nursing,
pp. 365-394
Bergersen and Krug, Pharmacology in Nursing,
pp. 417-432.
McClain and Gragg, Scientific Principles in Nursing,
pp. 179-202.

Laboratory Experience

Patient Care
Stool: observations of and recording of.
Follow Patient for Ba E and/or G.I. Series
(X-Ray Dept.)

WEEKS 9,10,& 11 -- Principles of Drug Administration
Examination

Topics

The Prescription or Doctors Order
Abbreviations
Metric System vs. Apothecary system
Principles of Safe Drug Administration
Hints for Dosage
Hints to Safeguard Drug Pouring
Control of Special Drugs

Vocabulary

As provided in the textbooks

Assigned Readings

Fuerst and Wolff, Fundamentals of Nursing,
pp. 423-506
Bergersen and Krug, Pharmacology in Nursing,
pp. 1-103
McClain and Gragg, Scientific Principles in
Nursing, pp. 243-268

Laboratory Experience

Patient care - investigate drugs - write
drug sheets - give drugs

WEEK 12 -- Principles of Surgical Asepsis

Topics

1. Principles of Sterilization
2. Stages of Wound Healing
3. Principles of Wound Care
Simple wounds, complex wounds

Vocabulary

Abrasion	Macule
Adhesion	Microorganism
Antiseptic	Necrotic
Asepsis	Ointment
Debridement	Papule
Emollient	Pathogens
Epithelial	Purulent
Excoriate	Pyogenic
Hematoma	Serosanguineous
Hypersensitivity	Serous
Irrigation	Sterile
Macerated	Vesicle

Assigned Reading

Fuerst and Wolff, Fundamentals of Nursing,
pp. 83-88; 535-547
Bergersen & Krug, Pharmacology in Nursing, pp. 115-
204

Assigned Reading, contd.

McClain and Gragg, Scientific Principles in Nursing, pp. 370-395

Laboratory Experience

Continuation of Weeks 9, 10, 11 with increasing complexity of care

Emotional support of patient and his family

WEEK 13 -- Principles of Management of Fluid Balance

Topics

1. Urinary tract elimination
2. Fluid administration
3. Electrolyte balance and relationship

Vocabulary

Anuria	Intravenous	Urethra
Capillary action	Meatus	
Catheterization	Nocturia	
Dysuria	Oliguria	
Electrolyte	Osmosis	
Filtration	Plasma	
Glycosuria	Renal	
Homeostasis	Retention	
Hypodermoclysis	Suppression	
Installation	Ureter	

Assigned Readings

Fuerst and Wolff, Fundamentals of Nursing, pp. 397-418

Bergersen and Krug, Pharmacology in Nursing, pp. 528-549

Laboratory Experience

Continuation of Week 11 with increasing complexity of care with emphasis urinary incontinency and fluid retention

Principles of Application of Topical Therapeutic Agents

Topics

1. Anatomy and Physiology of the skin and mucous membranes
2. Principles of Hot and Cold applications
3. Principles hypersensitivity of the host through use of topical medications
4. Principles of Counterirritants

Vocabulary

Absorption	Erythema
Adsorption	Extrinsic factor
Analgesia	Intrinsic factor
Cutaneous	Keratin
Dematologic	Local
Emollient	Pruritis
Epidermis	Topical

Assigned Readings

Fuerst and Wolff, Fundamentals of Nursing, pp. 511-532
Bergersen and Krug, Pharmacology in Nursing, pp. 514-527
McClain and Gragg, Scientific Principles in Nursing, pp. 291-316

Laboratory Experience

1. As above
2. Patients involved with Topical Therapeutic Agents

WEEK 14 -- Principles of Admitting a Patient and Assisting the Physician

Topics

1. Emotional attitude of the incoming patient and his family
2. Initial reception of the patient
3. Admission data
4. Explanation of hospital routines
5. The routine admission examination specimen collection
6. Assisting with doctor's procedures

Vocabulary

Abdominal paracentesis	Lumbar puncture
Auscultation	Neurological
Elective admission	Ophthalmoscope
Emergent admission	Percussion
Emphysema	Rapport
Empyema	Recipient
Exudate	Speculum
Gastric Analysis	Thoracic
Gastric Lavage	Thoracentesis
Genitalia	Toxic
Hemolytic reaction	Trausudate
Litho	Umbillicus

Assigned Reading

Fuerst and Wolff, Fundamentals of Nursing, pp. 129-143; 188-199; 579-615
McClain and Gragg, Scientific Principles in Nursing, pp. 316-323; 331-355; 63-67

Laboratory Experience

1. As above
2. Admit patient if possible
3. Assist Physician with admission physical

Principles of Care of Patients with Terminal Illnesses

Topics

1. Personal philosophy of death
2. Principles of meeting emotional needs of the patient and his family
3. Principles of meeting the physical needs of the patient
4. After care of the body
5. Needs of the family

Vocabulary

Fatal
Hypothermia
Morbid
Mortal
Peripheral
Respirations ceased

Assigned Reading

Fuerst and Wolff, Fundamentals of Nursing, pp. 619-634
McClain and Gragg, Scientific Principles in Nursing, pp. 396-413

Laboratory Experience

1. As above
2. Final conferences with clinical instructor

APPENDIX II

NURSING 132
FUNDAMENTALS OF NURSING
BEHAVIORAL OBJECTIVES

WEEK 1 -- Behavioral Objective

The student can:

1. List the major physical and emotional need of the well person and the ill person.
2. Give examples of the means by which we maintain
 - A. The individuality of the person admitted to the hospital.
 - B. The physiological functions of certain persons when there is an alteration in the usual physiological functions.
 - C. The safety of an individual who is admitted to the hospital.
3. Apply simple principles to the solving problem 3 of the "21 Nursing Problems" through use of problem solving.
4. Identify the distractions in appearance of the nurse in ECC uniform.
5. Define and use vocabulary words.

WEEK 2 -- Behavioral objectives

The student can:

1. Identify modes by which disease may be transferred.
2. Identify the principles of disinfection and sterilization in
 - A. Boiling
 - B. Hot Air
 - C. Steam under pressure
 - D. Oxidizing agents
 - E. Soaps and detergents
 - F. Chemicals
3. Demonstrate safe hand washing procedure and identify the principles employed.
4. Explain the factors leading to "Hospital (Staphylococcal) infections".
5. Name the three major forms of Isolation and identify the differences between the forms.
6. Define and use vocabulary words.

Films

ST603 Hand Washing

WEEK 3 -- Behavioral Objectives

The student can:

1. Explain the differences between
 - A. Governmental and Private Hospitals.
 - B. General and Special Hospital
2. Identify proper temperature, lighting and ventilation features for the hospital room.

3. Give examples of Problem 11 of "21 Nursing Problems" and suggest methods of solution three Problem solving.
4. Identify behaviors that communicate internal attitudes thru application of Mental Health Principle "All behavior has meaning".
5. Identify information to be found in a (1) patient's chart (2) Nurses Notes.
6. Outline the legal implication of restraints and detainers.
7. Define and use vocabulary words.

Films

- ST604 Making Unoccupied bed
 ST605 Making Occupied bed

WEEK 4 & 5 -- Behavioral Objectives

The student can:

1. Define and give examples of Verbal and Non-Verbal communication.
2. Identify methods of communication with the aphasic patient, deaf patient, patients with language barrier.
3. Identify means by which nurse contacts appropriate spiritual guidance for patients of various religions.
4. Identifies special needs of individuals various religions such as Roman Catholic, Anglican, Orthodox Hebrew.
5. List diversional activities appropriate to the child at various ages, the adult, the geriatrics patient under situations of disease such as fever, muscular problems, visual problems, etc.
6. List factors which inhibit learning and describes methods of insuring against these in the hospital setting.
7. Explain and give examples
 - A. Retroactive learning process
 - B. Advantages and disadvantages of repetition
 - C. Do and Tell method
 - D. Dangers of segmenting a procedure when teaching
 - E. Language inappropriate to teaching a patient
8. Define and use of vocabulary words

Films

- ST612 Tray Time
 ST606 Moving and Turning the Patient

WEEK 6 & 7 -- Behavioral Objectives

The student can:

1. Identify features of an attractive and unattractive tray.

2. Explain the principles related to Problem 6 of "21 Nursing Problems".
3. Describe and implement environmental factors necessary to Problem 2 of "21 Nursing Problems".
4. Identify personal hygiene problems and present remedial steps such as long finger nails of patient with dermatitis, long thick toe nails, hair mats, reddened area over bony prominences dry skin.
5. Describe 3 nursing measures to correct urinary retention.
6. Identify the amount of fluid loss per day via the three classifications.
7. List and employ 4 major principles of body mechanics as applied to bed making, object carrying, turning the helpless patient.
8. List and apply 4 major principles in positioning of patients in bed, chairs, commode.
9. Obtain accurate T.P.R. and B.P. and record accurately.
10. List principles of an effective A.M. and P.M. care.
11. Describe the significance of variations in vital sign readings.

Films

- | | |
|--------|---|
| ST 601 | <u>Measuring Blood Pressure</u> |
| ST 602 | <u>Temperature, Pulse and Respiration</u> |
| ST 609 | <u>Morning Care</u> |
| ST 611 | <u>Bed Bath</u> |

WEEK 8 -- Behavioral Objectives

The student can:

1. List the parts of the Gastrointestinal tract and the major function of each segment.
2. Identify the changes which are observed when any segment is functioning abnormally.
3. List the observations to be recorded on a patient with G.I. disorders.
4. List the principles to be utilized in the administration of the 3 classifications of enemas. Employ these principles in the procedure.
5. Chart fully "The enema".
6. Describe information necessary to a patient ordered for Ba E, G.I.S. and Small Intestinal Series.
7. Define and use vocabulary words.

Films

- | | |
|--------|------------------------|
| ST 610 | <u>Cleansing Enema</u> |
|--------|------------------------|

WEEK 9, 10 and 11 -- Behavioral Objectives

The student can:

1. Interpret abbreviations from lists, prescriptions and doctors orders.
2. Interchange values between metric and apothecary systems as applied to drugs, weight and heights.
3. Identify and give an example of the major classifications of drugs.
4. Outline the general nursing measures which protect the patient who is receiving drugs.
5. Name 7 drugs which are under the control of the Harrison Narcotic Act.
6. Outline the nurse's responsibilities when using drugs controlled by the Harrison Narcotic Act.
7. Describe the procedures the nurse will carry out when giving
 - a. Anti-hypertensives
 - b. Narcotics
 - c. Analgesics
 - d. Antibiotics
 - e. Sulfonamides
 - f. Local and central cough medicines
 - g. Antacids
 - h. Digitalis preparations
 - i. Topical drugs
8. Administer, record and complete sheets on drugs ordered on assigned patients.
9. Describe the advantages and limitations of the three major drug administration routes.
10. Compare and contrast hypodermic subcutaneous intramuscular, intervenous, intrathecal method of administration.
11. Define and use vocabulary words.

Films

ST 615 Applied Mathematics for Nurses

WEEK 12 -- Behavioral Objectives

The student can:

1. Define surgical and medical asepsis.
2. Take appropriate steps to establish and maintain each area.
3. Outline the mechanism and processes of wound healing.
4. Identify principles of handling sterile goods.
5. Maintain sterility of goods in use.
6. Recognize and report deviations from normal healing process.
7. Do a simple and complex wound dressing.
8. Identify the principles of safety in specific doctor's treatments
9. Define and use vocabulary words.

Films:

ST 614 Therapeutic Procedures

WEEK 13 -- Behavioral Objectives

The student can:

1. Identify the anatomical parts and their physiological function within the urinary tract.
2. Identify 6 major electrolytes and the function of each in the human.
3. Identify various forms of urinary drains.
4. Identify the principles necessary to safe insertion of catheters - retention and non-retention.
5. Identify and utilize principles necessary to safe maintenance of retention catheters.
6. Identify and utilize safety principles in intervenous fluid administration.
7. Control I.V.'s to meet hourly absorption orders by doctors.
8. Name and describe the superficial and sub-cutaneous structures of peripheral tissues.
9. Identify and explain the principles of cold applications.
10. Identify and explain the principles of dry and moist hot applications.
11. Outline the dangers of hot and cold application and prescribe nursing measures used to avoid harm.
12. Explain a theory of the development of hypersensitivity.
13. Explain the vascular changes expected in continual use of heat, and cold and counterirritants.
14. Define and use vocabulary words.

WEEK 14 -- Behavioral Objectives

The student can:

1. Collect and record pertinent information on patient.
2. Identify emotional attitudes and offer supportive actions.
3. Collect, record and disperse specimen collections.
4. Explain hospital routines in relation to meal times, visitor regulation, phone calls, personal belongings.
5. Verbalize his own philosophy of death as it is formulated to date.
6. List the legal aspects of death post accident, within 24 hours of admission, after 24 hour of admission.
7. Outline his responsibilities in the after care of the body.

8. Describe actions that would support the family of a dying patient.
9. Describe the physiological changes which occur during the death process and identify the nursing care each requires.
10. Maintain a special chart with appropriate data.
11. Define and use vocabulary words.

Films:

ST 608 Admitting and Discharging the Patient

APPENDIX III

NURSING 132
FUNDAMENTALS OF NURSING
WORKBOOK

WEEK I

TAPE 1.

1. List the seven needs of man:
2. What alterations may occur in each when fever is present?
3. Be prepared to discuss the saying "Truth is beauty, beauty truth".
4. List the 3 central principles of Nursing.
5. List 5 of the 9 functions which when altered may lead to constipation.

TAPE 2.

1. Give 3 examples you have observed in the past week that support the mental health principle that "all behavior has reason".
2. Name 3 nursing measures that do not require a doctor's order.
3. Be prepared to discuss the changing role of the nurse in 1960's.

TAPE 3.

1. Explain the statement "R.N. is a legal term".
2. Name the four part program of a balanced Health Program.
3. Nurses have the responsibility for promoting health teaching. How do you expect to carry out this aspect of your work during these first weeks of experience in the hospital?
4. Be prepared to discuss how your appearance in uniform may alter your effectiveness as a health teacher while caring for a patient.
5. Identify those problems listed by Abdellah which you feel have gained increased meaning for you during this first week of your nursing experience.

TAPE 4.

Apply the Problem Solving approach to the following situations:

1. Problem 3 - Confused patient who is not allowed out of bed.
2. Problem 7 - A patient has a chronic disease and is bedridden and has not had a bowel movement in three days.
3. Problem 13 - From your own experiences justify this statement.

WEEK II

TAPE 1.

1. To reduce direct and indirect transfer of pathogens is known as (medical, surgical) asepsis.
2. Name 5 defense mechanisms of the body and explain the role of each.

TAPE 2.

1. Describe the changes in the five named above that may occur when fever is present.

TAPE 3.

1. Name 2 additional defense mechanisms discussed in this tape. Outline the role of each.
2. You bring a clean linen to the patients room and place them on dressing table across the room from the foot of the bed. You discover two full packs of clean linen in the patient's bedside table. Considering factors of Medical asepsis and economy what would you do?
3. Name the 4 types of isolation discussed in this tape and list the essential materials employed for each.

TAPE 4.

Outline the process of handwashing. Give the principle underlying each step of the process.

WEEK III

TAPE 1.

1. Be prepared to discuss the two major contributions of the U.S.A. to the Arts - Namely architecture and dance.
2. Compare and contrast the hospital and the hotel in relationship to the traffic patterns and the rooms.

TAPE 2.

1. Go to the elevators in this building. Explain the decor of these as contrasted with those in a hospital.
2. Name the items in a patient's bed. Describe the cleansing and/or protection of each.

TAPE 3.

1. Describe the decor a patient's room you have entered this week. List the advantages and disadvantages of the situation.
2. Be prepared to discuss "maintaining the patient's privacy".

WEEK IV

TAPE 1.

1. Name 7 words which enlist satisfying reactions.
Name 7 words which tend to arouse negative reactions.
2. Explain some factors which can cause misinterpretation of verbal communication.
3. How can we hope to reduce misinterpretation of our words?

TAPE 3.

1. An Orthodox Jew is prohibited from "striking fire" from sundown Friday to sunset Saturday. Describe the problems which might arise for the bedridden patient of this persuasion.
2. Explain the role of Extreme Unction for the members of various Catholic churches.
3. Name some prohibitions of certain protestant churches.
4. Outline the factors we need to consider when we are preparing to enter a teaching activity.

TAPE 4.

Diversion is necessary to the mental needs of man even when illness is present. Describe an appropriate diversion for the following patients. Justify your selection.

1. A four year old girl (recuperating).
2. A first grade teacher (recuperating).
3. A seventy year old retired minister who has broken his glasses and can't read.
4. A 37 year old housewife who finished the 4th grade.

WEEK V

TAPE 1.

1. Name the vital signs and the range of normal for each.

TAPE 2.

1. Match the following:

___ Arrhythmia	1. fever
___ Bradycardia	2. slow pulse
___ Cardinal symptoms	3. blue tinge to skin
___ Cyanosis	4. vital signs
___ Febrile	5. fast pulse
___ Hyperthermia	6. fatal symptoms
	7. irregular pulse

2. Describe the affect on the stomach and heart under the following conditions:
 - a. Stimulation of the vagus nerve.
 - b. Depression of the vagus nerve.
3. Explain the process of obtaining an Apical-radial pulse rate. Explain your stand.
4. Before giving digitalis the pulse is counted for one full minute. Digitalis has among its action a stimulation of the vagus nerve. Explain the reason for the full minute count as described above.

TAPE 3.

1. Be prepared to discuss the elevation of respirations in the patient who is lying in bed.
2. Define:
 - a. Pulse deficit
 - b. Pulse pressure
 - c. Minute volume
3. Identify the following:

$A/R = 100/60 = 40$ _____

$BP = 100/60 = 40$ _____

$P = 60, BP = 100/60 = 2400$ _____
4. There are three points in the blood pressure taking in which there is significant finding. Identify each sound and give the meaning of each point.

WEEK VI

TAPE 1.

1. Name three means by which oxygen may be administered to a hospitalized patient.
2. Explain the danger of having oil on oxygen equipment. Name 3 ways of reducing the chance of O_2 coming in contact with oil in using such equipment.

3. Explain the role of the water used with oxygen therapy.

TAPE 2.

1. Identify the caloric value of each of the following, and name three common foods which are a good source of each foodstuff listed.
 - a. Carbohydrates
 - b. Proteins
 - c. Fats
2. Name 4 water soluble vitamins. Identify 2 sources of each.
3. Name 2 fat soluble vitamins. Identify 2 sources of each.
4. Identify 3 categories of foods which are necessary to a balanced diet.
5. Draw up a one day menu which employs these three groups in appropriate balance.
6. Outline your major considerations when feeding a helpless patient.
7. When a patient is incontinent of urine, name the 3 major principles you will apply to the nursing care he requires. Justify your answer.

TAPE 3.

1. Define and give an example for the following:
 - a. Hinge joint
 - b. Ball and socket joint.
 - c. Hyperextension of a joint
 - d. Contracture of a joint
 - e. Varicosity
2. Explain the rationale of utilizing the following processes when getting a bed patient up for the first time
 - a. Side role to attain sitting position
 - b. Allowing patient to sit on edge of bed for a time before standing

- c. Encouraging leg action while sitting on bed edge or placing a support under the feet.
3. Outline your approach to a patient who expresses concern about her blind mother's safety during this hospitalization.

TAPE 4.

1. Discuss the difference between habituation and addiction to drugs.
2. Explain the action of sedative when pain is present.

WEEK VII

TAPE 1.

1. Name the two objectives of the bath.
2. In considering the bed bath an additional objective is involved. Explain the actions you will institute to satisfy this objective.
3. Discuss how you will accommodate to the special considerations below.
 - a. Limited supply of water at the bedside.
 - b. Assuring privacy for the patient.
 - c. The aesthetics of the bed bath.

TAPE 2.

1. Outline your major concerns in giving a complete bath to an alert patient of the opposite sex who is on complete (absolute) bed rest.
 - a. mouth care
 - b. Soap removal
 - c. Temperature of the water
 - d. Pressure of stroke used on various areas of the body
 - e. Exercising joints of upper extremities
 - f. Exercising joints of lower extremities

TAPE 3.

1. The best approach to matting of the hair is prevention. However, if a mat does occur, outline your corrective approach.
2. Positioning of patients---needs to be practiced at home.
SIDE LYING POSITION
 - a. Head flexed
 - b. Head hyper extended
 - c. Head in normal position
 - d. Knees flexed with top leg resting on lower leg
 - e. Flex top knee, straighten lower leg in line with body
 - f. Reverse position of legs. Flex knee of bottom leg, straighten knee of top leg in line with body.

BACK LYING POSITION

- a. Top pillow edge under shoulders. Bottom pillow edge under neck.
- b. Reverse positions of pillows: Bottom pillow edge under shoulders. Top pillow edge under neck.
- c. One pillow under head. One pillow under knees (Roll pillow)

PRONE POSITION

- a. Try turning head to either side. One side is usually more comfortable, due to muscular development.

Each of these positions will help you to gain information about positions of comfort for the patients.

WEEK VIII

TAPE 1.

1. Name the six major areas of the Gastrointestinal (digestive) tract and the name applied to food stuffs found in each area.

2. How does the speed of the tract influence
 - a. The nutritive value obtained from injected food
 - b. The consistancy of the stool
3. Outline the observations a nurse makes on stool

TAPE 2.

1. Name 6 factors in life that may contribute to constipation.
2. Define
 - a. Constipation
 - b. Diarrhea
 - c. Fecal impaction
 - d. Distention
3. Identify the central understanding employed in the 20 min. every 2-3 hours rule for the use of the rectal tube.
4. How would this understanding be employed in teaching a patient with constipation to overcome his problem.

TAPE 3.

Identify the comparative factors in the following enemas

TYPE OF ENEMAS:	SOAP SOLUTION	1,2,3, ENEMA	OIL
			RETENTION

Rectal Tube Size:

Temperature of Solution:

Height of Solution:

Amount of Solution:

TAPE 4.

Outline your considerations of the following factors when administering a cleansing enema (Purgative)

Solution Container Size

Protection of the bed

Insertion of the tube

Aiding patient in control of sphincters

After care of equipment

Recording effectiveness of procedure

Position of the patient

WEEK IX

TAPE 1.

1. Drugs may be ordered in an English or a German system of measure. Name each of these and the nation from which it originated.
2. Name and explain the 5 more common routes of administering drugs.
3. Name the four segments of information a doctor's order for a drug must contain.
4. What is the nurse's major responsibility to the patient receiving a drug?
5. Name 3 sources of information on drugs.

TAPE 2.

1. Identify the taste you'd expect the following drug forms to have.
 - a. Alkaloids
 - b. Solution
 - c. Spirits
 - d. Glucosides
 - e. Elixirs
2. What form of medication preparation has replaced the "pill" form?
3. Explain the role of the enteric coat on tablets.
4. Explain the role of the spansule form of a drug.
5. Outline the special nursing care for a patient receiving an enteric coated medication.

TAPE 3.

1. Identify the classification of the drugs listed below according to the action described:
 - a. Morphine causes pupils of the eye to constrict _____.
 - b. Morphine slows respirations _____.
 - c. Codeine reduces the sensation of pain _____.
 - d. Penicillin controls the reproduction of pathogens _____.
 - e. Vitamin A to improve the integrity of the skin _____.
 - f. Thyroid extract to replace thyroxin production _____.
 - g. Insulin to control use of carbohydrates _____.
 - h. Iron to correct anemia _____.
 - i. B₁₂ to encourage maturation of red blood cells _____.
 - j. Neomycin to sterilize digestive tract _____.
 - k. Apomorphine to induce vomiting _____.
 - l. Aspirin to reduce the sensation of pain _____.

TAPE 4.

1. The effectiveness of any drug depends on its absorption. Name the single physiological factor which is responsible for drug absorption.
2. Name 4 organs by which drugs may be eliminated.
3. Place "1" before the route which generally affords the fastest rate of action of a drug and "8" before the one representing the slowest in the list below:

a. _____	Hypodermic	e. _____	Inhalation
b. _____	Intradermal	f. _____	Oral
c. _____	Intramuscular	g. _____	Rectal
d. _____	Intravenous	h. _____	Topical

WEEK X

TAPE 1.

1. Apply the underscored equivalencies and added conversion equivalencies list to the complete the following:

8 grains	=	_____	GM
60 cc	=	_____	ounces
30 minims	=	_____	c.c.
8 mgm	=	_____	grains
300 mgm	=	_____	Gm
0.5 GM	=	_____	mgm

WEEK XI

TAPE 1.

Order: Drug G 1/10 grain q 2 h p.r.n.

Label: Drug G 10 mgm/cc

Question: How many cc's necessary to give 1/10 grain?

Two Step Method:

Convert dosage and label to single system.

1. Conversion of Dosage

1/10 grain: X mgm :: 1/2 grain :: 30mgm
(note use of 30 rather than 32; 2 & 10 go into 30 evenly, but not into 32)

$$\begin{aligned} \frac{1}{2}X &= 3 \\ X &= 6 \text{ mgm, bringing } 1/2 \text{ across} = \text{invert} \\ \text{or } \frac{1}{10} \text{ gr. } \cdot X \text{ mgm} &:: 1 \text{ gr. } :: 60 \text{ mgm} \\ 1X &= 6 \text{ mgm} \end{aligned}$$

Soon you'll convert these in your head;
PRACTICE IS KEY.

New Question: How many cc's of 10 mgm/cc?

Solution to give 6 mgm

Metric in 10th give 0.6 cc or work it out.

$$\begin{aligned} 10 \text{ mgm: } 1 \text{ cc} &:: 6 \text{ mgm} : X \text{ cc} \\ 10X &= 6 \end{aligned}$$

$$X = 0.6 \text{ cc to be given}$$

Action: Give 0.6 cc every 2 hours as necessary.

2. Conversion of Label

$$10 \text{ mgm: } X \text{ gr. } :: 60 \text{ mgm} :: 1 \text{ gr.}$$

$$60X = 10$$

$$X = 1/6 \text{ gr. } /1 \text{ cc}$$

Remember: fractions = higher bottom number makes for smaller portion.

1/2 larger than 1/4

1/4 larger than 1/8

Math: 1/10 gr. : X cc :: 1/6 gr. : 1 cc

$$\frac{1}{6} X = \frac{1}{10}$$

$$X = \frac{6}{1} \times \frac{1}{10} = \frac{6}{10}$$

$$X = 0.6 \text{ cc}$$

Action: Give 0.6 cc every 2 hours as necessary.

Order: Drug H gr. V every 4 hours if necessary.

Label: Drug H 4%

Question: How many cc's to give V gr.?

1. Conversion of dose

Memory/gr. V = 0.3 Gm or 30-32 mgm.

Math: 4 Gm : 100 cc :: 0.32 Gm : X cc

$$4X = 32$$

$$X = 8 \text{ cc}$$

Action: Give 8 cc of 4% solution every 4 hours if necessary.

2. Conversion of Drug

4 Gm = X grains

1 Gm : 15 Gr. :: 4 Gm. : X Gr.

$$1 X = 60$$

$$X = 60 \text{ Gr.}$$

Math: 60 gr. : 100 cc :: 5 gr. : X cc

$$6 X = 50$$

$$X = 8.2 \text{ cc}$$

Action: Give 8.2 (or 8) cc of 4% solution every 4 hours if necessary.

TAPE 2.

Drug J gr. 1:100 for distention

Label: Drug J 1:2000

Question: How many cc necessary to give gr. 1/100?

Conversion of Dose

Memory: gr. 1/100 = 0.0006 Gm or 0.6 mgm

: F : 2000 = 1 Gm (1000 mgm) : 2000 cc

Math: 0.6 mgm : X cc :: 1 Gm (1000 mgm) : 2000 cc

Note conversion to mgm of doctor's order

$$1000X = 1200$$

$$X = 1.2 \text{ cc}$$

Action: Give 1.2 cc of drug J 1:2000 for distention
Conversion of Label
Memory: 1 Gm = 15-16 gr.

Math: 1:2000 = 1 Gm (15 gr.) in 2000 cc
1/100 gr. : X cc :: 15 gr. : 2000 cc
15 X = 20
X = 1.3 cc

Action: Give 1.3 cc Drug J. for distention

WEEK XI

Supplementary Problems:

1. Order: Drug Z 30 mgm a.c.
Label Drug Z 1cc = 0.3 Gm
Action: Give _____ cc Drug Z _____ meals
2. Order: Drug Y 0.5 Gm b.i.d.
Label: Drug Y = 500 mgm/tablet
Action: Give _____ tablet(s) Drug Y every _____ hours
3. Order: Drug X 2 mgm (h) stat.
Label: Drug X 1:200
Action: Give _____ cc Drug X by _____
4. Order: Drug W 1 Gm t.i.d.p.c.
Label: Drug W 10% soln.
Action: Give _____ cc Drug W _____ each meal

TAPE 2.

Supplemental Problems:

1. Order: Drug Z 30 mgm h.s.
Label: Drug Z 1 cc = 1/2 grain
Action: Give _____ cc Drug Z _____ (time)
2. Order: Drug Y 0.5 Gm q.d.
Label: Drug Y 7 1/2 grains/tablet
Action: Give _____ tablets _____ daily
3. Order: Drug X 1/8 grain (h) stat.
Label: Drug X 1:2000
Action: Give _____ cc Drug X by _____ Route _____ frequency
4. Order: Drug W 2cc p.r.n. for restlessness
Label: Drug W 10% solution
Action: Give 2 cc _____ frequency for restlessness
Patient receives _____ mgm of Drug W
5. Be prepared to name the 5 areas in which a nurse

5. contd.

can make an error in drug administration.
Identify safety measures to be employed at each stage of drug administration to insure safety.

TAPES 3 & 4

1. Review "Additional Hints for Dosage" and
2. Review "Additional Hints for Medication Administration"
3. Identify 7 drugs controlled by the Harrison Narcotic Act.
4. Record pulse rate and volume and respirations in research on voidings following high fluid intake.

- | | PULSE RATE | BOLUME | RESPIRATIONS |
|---------------------------------|------------|--------|--------------|
| a. Immediately Prior to Voiding | | | |
| b. During Micturation | | | |
| c. 2 minutes after voiding | | | |
5. Note sensory changes and sensorium changes.
 6. How does this release of a distended bladder lead to these changes?

WEEK XII

TAPE 1.

1. Describe the changes which transpire during the Primary Intention phase of wound healing.
2. How does Secondary Intention differ from the above.
3. Identify principles which have been applied to Medical Asepsis which apply to Surgical asepsis.

TAPE 2.

1. Describe your actions in each of the following situations involving surgical asepsis; Name the principles involved in your decisions:
 - a. In placing cotton balls on a sterile field you are setting up, you touch the forceps to the center of the field.

- b. The waist ties on the back of a doctor's sterile gown appear to be loosening and will fall forward.
- c. The sterile pack, as yet unopened, feels damp to you.
- d. Another nurse holds forcep points above the level of his hands while setting up a sterile field.
- e. A fly lites upon the edge of the sterile field you are setting up.
- f. You are unsure of the sterility of a container of gauze sponges.

TAPE 3.

- 1. Outline your actions and justify each step you present in the process of catheterizing a patient.
- 2. Identify means to be employed to reduce the inward, outward movement of a retention catheter.

TAPE 4.

Be prepared to discuss the anatomical reasons for the differences any in each of the following:

	Thorocentesis	Paracentesis
Position		
Open or closed system		
Needle Size		
Pulse recording		
Recording outcome		

WEEK XIII

TAPE 1.

- 1. Name each major segment of the urinary tract and identify the role of each.

2. Identify the significance of the following observation relating to urine.
 - a. Color
 - (1) Gray or smokey
 - (2) Pink
 - (3) Dark yellow or orange
 - b. Cloudiness
 - c. Voiding 40 cc about every 1/2 hour
 - d. A strong odor of Ammonia

TAPE 2.

1. Describe the daily normal fluid loss by the various systems in terms of expected norms or ratios
 - a. Urinary
 - b. Respiratory
 - c. Skin and Gastrointestinal
2. Fluids given by I.V. vary. Examples of electrolytes are Sodium, Chloride, glucose, potassium, calcium, phosphorus. Be prepared to discuss the rationale which prevents us from using distilled water as an I.V. fluid.
3. Name 4 receptors in the skin which help prevent injury.

TAPE 3.

1. If heat or cold applications are used we expect what vascular advantages to occur.
2. If either is continued without interruption what vascular changes might we anticipate.
3. To dilate deep vessels of the arm you would apply dry, moist heat. Justify this statement.
4. Explain the rationale for the reduced use of hot water bottles and heating pads to the feet of patients complaining of being cold.

TAPE 4.

1. Be prepared to discuss the reactions of an allergen

meeting a free and a fixed antibody.

2. Explain your actions when/while sponging a patient to reduce his fever, he begins to shiver. Justify your answer physiologically.

WEEK XIV

TAPE 1.

1. Outline your major considerations during the admission of a patient.
2. Be prepared to discuss the following terms as they relate to the doctors physical examination.
 - a. Otoscope
 - b. Ophthalmoscope
 - c. Sphygmomanometer
 - d. Stethoscope
 - e. Percussion hammer
 - f. Tuning fork
3. Outline your actions relative to the collection of admission specimens on a new patient.

TAPE 2.

1. Be prepared to discuss your philosophies of life and death.

TAPE 3.

1. How would you proceed if a terminal patient voiced his belief that he was going to die.
2. Explain the changes which occur in the following in the death process:
 - a. Senses
 - (1) Textile
 - (2) Sight
 - (3) Hearing
 - b. Skin
 - c. Gastrointestinal motility

3. How would each of these changes affect your nursing care?

TAPE 4.

1. How would you care for each of the following in your after-death care?
 - a. an engagement ring
 - b. the body
 - c. Catheter in place at the time of death
 - d. the family

APPENDIX IV

NURSING 232

MEDICAL-SURGICAL NURSING 11

SYLLABI

TO THE STUDENT

This booklet contains the course outline for Nursing 232, Medical-Surgical Nursing II. It contains the weekly assignment sheets which list the topic(s) for discussion and the required reading assignments.

The objectives listed below will serve as a guide for the course requirements. It is expected that you will have read the assigned reading before coming to seminar. Questions arising from your reading may be presented at any time in seminar. For a detailed discussion of disease entities per se, please refer to any recent Medical-Surgical Nursing Text in the library, such as Smith and Gips, Care of the Adult Patient, Shafer, et Al., Medical-Surgical Nursing, etc.

Pre and post-clinical conferences will be utilized as additional learning tools in which students will share experiences related to the nursing care of individuals with selected medical-surgical conditions, assist in the evaluation of the initial assessment of the individual with a pathological condition(s), and be involved in the evaluation of the effectiveness of the approaches employed by the student and/or the peer group based upon scientific principles and the problem-solving technique.

OBJECTIVES

The student enrolled in Nursing 232 (Medical-Surgical Nursing II), will be helped to develop:

1. an increasing concept of himself as related to his perceptions, feelings, and actions.
2. an increasing understanding of organic and psychologic influences upon the behavior of patients with selected medical-surgical conditions.
3. a basic understanding of the physiological action of the various classifications of drugs commonly administered to patients with the conditions under discussion.
4. a basic understanding of the rationale underlying the common dietary restrictions and/or modifications for patients with the conditions under discussion.
5. an increasing ability to utilize the problem-solving technique in evaluating selected patients and their conditions, planning and executing appropriate nursing care for the individual patient, and evaluating the effectiveness of this care.
6. an increasing awareness of the more pertinent community health agencies available to the medical-surgical patient and/or his family.
7. an increasing ability to establish and maintain effective interpersonal relationships with the patient and others.
8. an increasing understanding of mental health principles.
9. an increasing understanding of the significance of verbal and non-verbal communications.
10. an increasing ability to function as a member of the health team with emphasis upon teaching and/or rehabilitation of selected patients.

NURSING 232

WEEK 1. Topics:

- A. Introduction to Nursing 232
 - 1. Objectives
 - 2. Course Requirements
- B. Effects of Injurious Agents on Cells
 - 1. Physical and Chemical Agents
 - 2. Types of Injury
 - a. Cell Deprivation
 - b. Interference with Cellular Enzymes
 - c. Alteration of Cellular Protein
 - 3. Cellular Response
 - a. Atrophy
 - b. Hypertrophy
 - c. Hyperplasia
 - d. Metaplasia
 - e. Necrosis
 - f. Infarction
 - g. Ischemia
 - 4. Tissue Trauma
 - a. Cold
 - b. Heat
 - c. Radiation
 - 5. Toxic Chemical Agents
 - a. Carbon Monoxide
 - b. Fat Solvents
 - c. Heavy Metals
 - d. Methyl Alcohol
 - e. Insecticides, Herbicides
 - 6. Chronic Infection
 - 7. Body Fluids and Tissue Injury
- C. Response of Body to Injury and Illness
 - 1. Protective Mechanisms
 - 2. Sympathoadrenal Medullary System Response
 - a. Autonomic Nervous System
 - (1) Sympathetic Nervous System
 - (2) Parasympathetic Nervous System
 - b. Effect of Removal or Inactivation of Sympathetic Nervous System
 - 3. Metabolic Responses
 - a. Thyroid Hormone
 - b. Posterior Pituitary (Neurohypophysis)
 - c. Adrenocorticotrophic Hormones
 - d. Seyle's Concept of Stress
 - e. Metabolic Changes During Convalescence

Reading Assignemnts:

1. Beland, Irene L., Clinical Nursing: Patho-Physiological and Psychosocial Approaches, The Macmillan Company, New York, 1965, pp. 105-163; 238-263.
2. Bergersen, Betty S. and Elsie E. Krug, Pharmacology in Nursing, 10th Ed., The C.V. Mosby Company, St. Louis, 1966, pp. 341-356; 359-380; 602-609.
3. DeCoursey, Russell Myles, The Human Organism, 2nd Ed. McGraw-Hill Book Company, Inc., New York, 1961, pp. 202-219.

Laboratory Experience:

Nursing Care of Patients with Gynecological and Genitourinary Disorders.

WEEK 2. Topics:

- A. The Immunological Process
 1. Types of Immunity
 - a. Active
 - b. Passive
 - c. Permanent
 - d. Temporary
 2. Foreign Tissue Reactions
- B. Allergic Reactions
 1. Development of Allergy
 2. Anaphylactic Shock
 3. Principles Underlying Treatment of Patients with Allergic Manifestations
 4. Process of Desensitization
- C. The Inflammatory Process
 1. Physiological Changes in Inflammation
 - a. Blood Vessels
 - b. Leukocytes
 - c. Sequence of Events Following Acute Tissue Injury
 - d. Types of Exudates
 - e. Signs and Symptoms of Inflammation
- D. Physiology of Tissue Reapir

Reading Assignments:

1. Beland, Clinical Nursing, pp. 264-325
2. Bergersen and Krug, Pharmacology in Nursing, 10th Ed., pp. 394-400; 666-676
3. Cooper, Lenna F., EtAl., Nutrition in Health and Disease, 14th Ed., J.B. Lippincott Company, Philadelphia, 1963, pp. 357-363

Reading Assignments
contd.

4. DeCoursey, The Human Organism, 2nd Ed., pp. 282-310.
5. Dickens, Margaret L., Fluid and Electrolyte Balance, F.A. Davis Company, Philadelphia, 1967, pp. 21-38.

Laboratory Experience

Nursing Care of Patients with Allergic Reaction,
Inflammatory Conditions. Intradermal Skin Testing.

WEEK 3. Topics

- A. Psychosocial Aspects of Illness
1. Cultural Influences
 2. Concept of Time
 3. Value System
 4. Common Expectations of Nurses
 5. Psychological Stress
 6. Environmental Manipulation

Reading Assignments:

1. Beland, Clinical Nursing, pp. 326-378.
2. Bergersen and Krug, Pharmacology in Nursing, 10th ed., pp. 264-280; 326-336.
3. Cooper, Et Al., Nutrition In Health and Disease, 14th ed., pp. 37-47.

Laboratory Assignment:

Nursing care of patients experiencing psychological stress and conditions discussed in Weeks 1 and 2.

WEEK 4. Topics:

- A. Maturational Level and Response to Illness
1. Erickson's "Stages of Life"
 - a. Infancy: Trust vs. Mistrust
 - b. Early Childhood: Autonomy vs. Shame and Doubt
 - c. Play Age: Initiative vs. Guilt
 - d. School Age: Industry vs. Inferiority
 - e. Adolescence: Identity vs. Identity Diffusion
 - f. Young Adulthood: Intimacy vs. Isolation
 - g. Adulthood: Generativity vs. Self-Absorption
 - h. Senescence: Integrity vs. Disgust
- B. EXAMINATION: First Hour, Friday, December 6, 1968.

- C. Introduction to cell proliferation and maturation
1. Historical considerations
 2. Neoplastic vs. normal tissue and growth
 3. Etiological considerations
 4. Cultural considerations

Assigned Reading:

1. Beland, Clinical Nursing, pp. 1111-1130; 920-243.
2. Bergersen and Krug, Pharmacology in Nursing, 10th ed. pp. 104-114.
3. Cooper, Et Al., Nutrition in Health and Disease, 14th ed., pp. 156-174 (Review from MCH)
4. Dickens, Fluid and Electrolyte Balance, pp. 39-77-

Laboratory Experience

Nursing care of the teenage patient and/or the geriatric patient with conditions discussed in Weeks 1-3. Selection of patient for nursing care study.

WEEK 5. Topics:

- A. Nursing Care of Patients with Problems of Cell Proliferation and Maturation
1. Signs and Symptoms of Neoplastic Disease
 - a. Local effects
 - b. Systemic effects
 - c. Relief of pain
 - d. Intractable pain
 2. Psychological considerations
 3. Therapeutic measures
 - a. Irradiation therapy
 - b. surgical therapy
 - c. Chemotherapy
 4. Neoplasms of specific sites
 - a. Breast
 - b. Colon
 - c. Larynx

Assigned Reading:

1. Beland, Clinical Nursing, pp. 944-1004
2. Bergersen and Krug, Pharmacology in Nursing, 10th ed., pp. 643-665; 415
3. Dickens, Fluid and Electrolyte Balance, pp. 79-113

Laboratory Experience:

Nursing care of the patient with neoplastic disease.

Observation of Irradiation therapy.

WEEK 6. Topics:

- A. Care of the patient with problems in chemical regulation
 - 1. Etiological Factors in Disorders of Regulation
 - 2. Genetic considerations
 - 3. Enzymatic activity
 - 4. Hormonal activity
 - a. Anterior Pituitary (Adenohypophysis) activity
 - (1) Physiological effects of Hypo-function
 - (2) Physiological effects of hyper-function
 - (3) Principles underlying treatment
 - b. Posterior pituitary (Neurohypophysis) activity
 - c. Adrinomedullary activity
 - d. Adrenocortical activity
 - (1) Physiological effects of hypo-function
 - (2) Physiological effects of hyper-function
 - (3) Principles underlying treatment

Assigned Reading:

- 1. Beland, Clinical Nursing, pp. 1005-1041
- 2. Bergersen and Krug, Pharmacology in Nursing, 10th ed., pp. 602-608; 617-629.
- 3. Cooper, Et Al., Nutrition in Health and Disease, 14th ed., pp. 380-384.
- 4. DeCoursey, The Human Organism, 2nd ed., pp. 520-534.
- 5. Dickens, Fluid and Electrolyte Balance, pp. 113-154

WEEK 7. Topics:

- A. Care of the patient with problems of chemical regulation (contd.)
 - 1. Hormonal activity (contd.)
 - a. Thyroid activity
 - (1) Physiological effects of hypo-function
 - (2) Physiological effects of hyper-function
 - (3) Principles underlying treatment
 - (a) Surgical
 - (b) Chemical(Radioactive Iodine)
 - b. Parathyroid activity
- B. Care of the patient with problems of neural regulation

1. Organization of the central nervous system
2. Cerebrospinal fluid
3. Blood-Brain Barrier
4. Cerebral Blood Supply
5. Cerebral Metabolism
6. Physiological considerations
 - a. Nerve Tissue
 - b. Reflex Arc
 - c. Spinal Cord
 - d. Integration of brain function
 - e. Thalamus and basal ganglia
 - f. Cerebellar Function
 - g. Cranial Nerves
 - h. Cerebrocortical Function
 - i. Increased intracranial pressure

Assigned Reading:

1. Beland, Clinical Nursing, pp. 1041-1093
2. Bergersen and Krug, Pharmacology in Nursing, 10th ed., pp. 608-617.
3. Cooper, Et Al., Nutrition in Health and Disease, 14th ed., pp. 48-55; 203-222.
4. DeCoursey, The Human Organism, 2nd ed., pp. 148-169.

Laboratory Assignment:

Nursing care of patients with disorders of the thyroid and/or Parathyroid glands and/or conditions discusses in Weeks 1-6
 Observation of Radioisotope therapy
 Observation of Neurological examination

WEEK 8. Topic:

- A. Care of the patient with problems of neural regulation (contd.)
 1. Diagnostic measures
 2. Care of the patient with increased intracranial pressure
 3. Care of the patient with cerebral vascular disease
 4. Care of the patient with neurological disease
 - a. Epilepsy
 - b. Multiple Sclerosis
 - c. Myasthenia gravis
 - d. Headache
 - e. Trigeminal neuralgia
 - f. Spinal cord compression
 - g. Paraplegia

Assigned Reading:

1. Beland, Clinical Nursing, pp. 1093-1110
2. Bergersen and Krug, Pharmacology in Nursing, 10th ed., 218-220; 234-252; 298-306.
3. DeCoursey, The Human Organism, 2nd ed., pp. 179-199.

Laboratory Experience:

Care of the Patient with neurologic disease
and/or conditions discussed in Weeks 1-7.
Observation of physical therapy of patients with
neurological disease.

APPENDIX V

BEHAVIORAL OBJECTIVES
MEDICAL-SURGICAL NURSING

BEHAVIORAL OBJECTIVES
MEDICAL-SURGICAL NURSING

WEEK I. Behavioral Objectives

The student can:

1. Describe the effects of injurious agents on cells in relationship to:
 - a. Types of injury
 - b. Cellular response
 - c. Tissue Trauma
 - d. Toxic chemical agents
 - e. Chronic infections
2. Describe the action of the autonomic nervous system.
3. List the physiological effects of parasympathetic nervous system stimulation.
4. List the physiological effects of sympathetic nervous system stimulation.
5. Describe the effects of inactivation of a portion of the sympathetic nervous system.
6. Explain the importance of the sympathoadrenal medullary system response.
7. Describe the metabolic response to illness or injury by the:
 - a. Thyroid
 - b. Neurohypophysis
 - c. Adrenal Cortex

WEEK II. Behavioral Objectives

The student can:

1. Define and give examples of:
 - a. Active immunity
 - b. Passive immunity
 - c. Permanent immunity
 - d. Temporary immunity
2. Discuss the development of foreign tissue reactions and recent advances in regard to this.

3. List the symptoms of anaphylactic shock and the physiological basis of each symptom
4. Describe the immediate treatment and nursing care for the patient in anaphylactic shock.
5. Identify four ways by which anaphylaxis may be avoided.
6. Describe the process of desensitization.
7. Describe the physiological alterations accompanying inflammation

WEEK III. Behavioral Objectives

The student can:

1. Discuss the psychosocial aspects of illness in relationship to:
 - a. Cultural influences
 - b. Value system
 - c. Psychological Stress
 - d. Environmental Manipulation

WEEK IV. Behavioral Objectives

The student can:

1. Discuss the concept of and the developmental objectives of Erickson's stages of life:
 - a. Infancy
 - b. Early childhood
 - c. Play age
 - d. School age
 - e. Adolescence
 - f. Young adulthood
 - g. Adulthood
 - h. Senescence

WEEK V. Behavioral Objectives

The student can:

1. Describe normal cell proliferation and maturation.
2. Differentiate between normal and malignant cell proliferation and maturation.

3. List the seven danger signals suggesting neoplastic disease.
4. List the late signs and symptoms of neoplastic disease.
5. Discuss the nurse's role in the relief of pain.
6. Discuss and describe at least two surgical procedures for the relief of intractable pain.
7. Describe the physiological effects of irradiation therapy.
8. Discuss the nursing care necessary for the patient receiving irradiation therapy.

WEEK VI Behavioral Objectives

The student can:

1. List the signs and symptoms exhibited by the patient with hypofunction of the anterior pituitary.
2. List the signs and symptoms exhibited by the patient with hyperfunction of the anterior pituitary gland.
3. Discuss the physiological effect of the secretions of the posterior pituitary gland.
4. List the hormones produced by the adrenal cortex and the physiological function of each.
5. Describe the patient with hyperfunction of the adrenal cortex and outline his general nursing care.
6. Describe the patient with hypofunction of the adrenal cortex and outline his general nursing care.
7. Discuss the nursing care of the patient with a pheochromocytoma.

WEEK VII. Behavioral Objectives

The student can:

1. Describe the patient with hyperfunction of the thyroid gland and outline his general nursing care.
2. Describe the patient with hypofunction of the thyroid gland and outline his general nursing care.
3. Discuss the medical and/or surgical treatment of the patient with hyperthyroidism.
4. Discuss the medical treatment of the patient with hypothyroidism.

WEEK VIII. Behavioral Objectives

The student can:

1. Describe and discuss the more common neurological diagnostic measures, such as lumbar puncture, reflex testing, myelogram, etc.
2. List the signs and symptoms of increased intracranial pressure and the physiological basis of each.
3. Outline the general nursing care of a patient with increased intracranial pressure.
4. Discuss the etiology of cerebral vascular disease.
5. Outline the immediate treatment and nursing care of the patient with a CVA.
6. Define and discuss the forms of epilepsy, their etiology and their treatment.
7. Discuss the emergency care of the individual with a suspected fracture of the cervical spine.
8. Outline the nursing care for a patient with paraplegia one week following injury.

APPENDIX VI

MEDICAL-SURGICAL NURSING II
WORKBOOK

MEDICAL-SURGICAL NURSING II

WORKBOOK

WEEK I Tape 1

1. List four causes of pathological atrophy:
 - a.
 - b.
 - c.
 - d.
2. Differentiate between hyperplasia and hypertrophy:
3. Define the following terms:
 - a. Metaplasia-
 - b. Aplasia-
 - c. Necrosis-
 - d. Infarct-
 - e. Ischemia-
4. Describe how wet gangrene (venous gangrene) develops in a patient with a constricting long leg cast:
5. The three organs most vulnerable to damage from an infarct are:
 - a.
 - b.
 - c.
6. List four common causes of localized tissue ischemia:
 - a.
 - b.
 - c.
 - d.

WEEK I Tape 2

7. Why are puncture wounds usually considered to be more serious than a laceration?
8. With each increasing 1°F., the metabolic rate increases approximately _____ per cent.
9. Indicate the amount of tissue damage seen in the following types of burns:
 - a. 1st degree-
 - b. 2nd degree-
 - c. 3rd degree-
 - d. 4th degree-

WEEK I Tape 3

10. Indicate the penetrating ability of the following particles, the amount of protection necessary to protect the body, and the effects seen following exposure to each:
 - a. Alpha particles-
Penetrating ability-
Protection-
Effects-
 - b. Beta particles-
Penetrating ability-
Protection-
Effects-
 - c. Gamma particles-
Penetrating ability-
Protection-
Effects
11. List three types of tissue that are highly sensitive to radiation:
 - a.
 - b.
 - c.
12. List five symptoms commonly seen in the individual who has been exposed to total body irradiation:
 - a.
 - b.
 - c.
 - d.
 - e.
13. List three ways in which irradiation therapy may be administered:
 - a.
 - b.
 - c.
14. List four ways in which the nurse may help to relieve the discomfort of the patient suffering from irradiation sickness:
 - a.
 - b.
 - c.

WEEK I Tape 4

15. Define the "Law of Mass Action":

16. List two fat solvents commonly used in the hospital and the home:
 - a.
 - b.
17. Briefly discuss the ingestion of methyl alcohol (wood alcohol);
18. List four secretions or body fluids which are capable of causing tissue damage:
 - a.
 - b.
 - c.
 - d.

WEEK I Tape 5

19. List six measures which may be employed in the treatment or nursing care of the individual with muscle spasm:
 - a.
 - b.
 - c.
 - d.
 - e.
 - f.
20. List eight physiological effects seen in the individual following stimulation of the sympatho-adrenal medullary system:
 - a.
 - b.
 - c.
 - d.
 - e.
 - f.
 - g.
 - h.
21. The chemical mediator between the parasympathetic post-ganglionic fiber and the effector cell (muscle or gland) is _____.
22. The sympathetic nervous system is also known as the _____ nervous system.

WEEK I Tape 6

23. List three common side effects of the ganglionic blocking agents:
 - a.
 - b.
 - c.
24. List four of the physiological reactions of the patient in phase I of convalescence:
 - a.
 - b.
 - c.
 - d.

25. List two of the physiological reactions of the patient in phase II of convalescence:
- a.
 - b.

WEEK II, Tape 1

1. Define the following terms:
 - a. Natural immunity-
 - b. Acquired immunity-
 - c. Antigen-
 - d. Antibody-
2. List three ways in which acquired immunity can be conferred:
 - a.
 - b.
 - c.
3. What happens to mice when their thymus gland is removed shortly after birth? When removed in adulthood?
4. List two problems which arise as a result of the immunological process:
 - a.
 - b.

WEEK II, Tape 2

5. List six examples of allergic reactions:
 - a.
 - b.
 - c.
 - d.
 - e.
 - f.
6. List the four ways in which an antigen can be introduced:
 - a.
 - b.
 - c.
 - d.
7. List four diseases which are possibly the result of an autoimmune process:
 - a.
 - b.
 - c.
 - d.
8. Differentiate between the following:
 - a. Immediate hypersensitivity reaction-
 - b. Delayed hypersensitivity reaction-

9. List four effects of systemic allergic reaction:
- a.
 - b.
 - c.
 - d.

WEEK II, Tape 3

10. List six examples of hypersensitivity reactions of the immediate type:
- a.
 - b.
 - c.
 - d.
 - e.
 - f.
11. List the three outstanding symptoms of anaphylactic shock:
- a.
 - b.
 - c.
12. Discuss the common treatment employed for the following symptoms of serum sickness:
- a. Urticaria-
 - b. Itching-
 - c. Arthralgia
 - d. Laryngeal edema

WEEK II, Tape 4

13. Define the following terms:
- a. Thrombocytopenia-
 - b. Agranulocytopenia-
14. List four symptoms seen in the individual with contact dermatitis:
- a.
 - b.
 - c.
 - d.
15. Indicate the three uses of the intradermal skin test:
- a.
 - b.
 - c.

16. Discuss the drug epinephrine in relation to the following points:
- Action-
 - Physiological effects-
 - Route of administration-
 - Usual dosage-
 - Contraindications-
 - Symptoms of overdosage-
17. What is the advantage of ephedrine sulfate over epinephrine?

WEEK II, Tape 5

18. List the five symptoms of the inflammatory process:
- a.
 - b.
 - c.
 - d.
 - e.
19. List the three factors contributing to the production of inflammatory exudate:
- a.
 - b.
 - c.
20. Indicate the character of the exudate produced in the following:
- a.
 - b.
 - c.
21. List the three types of granular leukocytes (polymorphonuclear leukocytes) and the function of each:
- a.
 - b.
 - c.
22. List the three types of nongranular leukocytes (agranulocytes) and the origin of each:
- a.
 - b.
 - c.
23. List five functions of the spleen:
- a.
 - b.
 - c.
 - d.
 - e.

24. List the three ways in which the number of leukocytes is increased in response to tissue injury:
 - a.
 - b.
 - c.
25. List four conditions in which physiological (normal) leukocytosis commonly occurs:
 - a.
 - b.
 - c.
 - d.
26. List three conditions in which eosinophilia is commonly seen:
 - a.
 - b.
 - c.

WEEK III, Tape 1

1. List three possible outcomes of an abscess:
 - a.
 - b.
 - c.
2. Define and differentiate between the following:
 - a. Sinus-
 - b. Fistula-
3. Define and differentiate between the following:
 - a. Ulcer-
 - b. Erosion-
4. Discuss the characteristics of the following types of exudate:
 - a. Purulent exudate-
 - b. Serous exudate-
 - c. Fibrinous exudate-
 - d. Hemorrhagic exudate-
5. List five of the principles underlying the care of the patient with an inflammatory process:
 - a.
 - b.
 - c.
 - d.
 - e.
6. List four instances when repair by substitution of fibrous connective tissue occurs:
 - a.
 - b.
 - c.
 - d.

WEEK III, Tape 2

7. List six aspects of culture that occur in all cultures:
 - a.
 - b.
 - c.
 - d.
 - e.
 - f.
8. List eight elements of culture that have significance to the practice of nursing:
 - a.
 - b.
 - c.
 - d.
 - e.
 - f.
 - g.
 - h.
9. List four elements of culture which each person brings to every situation:
 - a.
 - b.
 - c.
 - d.

WEEK III, Tape 3

10. List five premises upon which the American value system is based:
 - a.
 - b.
 - c.
 - d.
 - e.
11. List the four elements of the American cultural view of illness:
 - a.
 - b.
 - c.
 - d.
12. List eight possible sources of psychological stress that may arise in nursing care:

a.	e.
b.	f.
c.	g.
d.	h.
13. List four steps in the establishment of significant interpersonal relationships:

a.	b.	c.	d.
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14. List five of the factors which influence the reaction of the individual to illness:

- a.
- b.
- c.
- d.
- e.

WEEK III, Tapes 4,5,6

THANKSGIVING HOLIDAYS!!!

WEEK IV, Tape 1

1. Indicate four laws which govern the growth and development of man:
 - a.
 - b.
 - c.
 - d.
2. List Erickson's eight stages in the life cycle of man and indicate the care problem of each stage:
 - a.
 - b.
 - c.
 - d.
 - e.
 - f.
 - g.
 - h.

WEEK IV, Tape 2

3. Briefly discuss the climactaric in
 - a. the female
 - b. the male
 - a.
 - b.
4. List three characteristics of homeostatic (normal) cell proliferation:
 - a.
 - b.
 - c.
5. Define the following terms:
 - a. Neoplasm
 - b. Tumor
 - c. Benign
 - d. Maligant

6. List three factors responsible for the increase in the number of persons diagnosed as having cancer:
 - a.
 - b.
 - c.
7. List four of the most common sites of cancer in the older age groups:
 - a.
 - b.
 - c.
 - d.
8. List two characteristics of neoplastic tissue:
 - a.
 - b.
9. Differentiate between the following terms:
 - a. Carcinoma
 - b. Sarcoma
10. Indicate the body structures which arise from the ectoderm:
11. Indicate the body structures which arise from the mesoderm:
12. Identify the characteristics of malignant neoplasms on the basis of:
 - a. Capsule
 - b. Rate of growth
 - c. Characteristics of cells
 - d. Mitatic activity
 - e. Vascularity
13. The four most common sites of metastasis are:
 - a.
 - b.
 - c.
 - d.

WEEK V, Tape 1

1. List four lessons which are commonly considered to be precancerous:
 - a.
 - b.
 - c.
 - d.
2. List three ways in which a neoplasm may produce manifestations due to mechanical effects:
 - a.
 - b.
 - c.

3. Discuss the effects of a rapidly growing neoplasm in the cerebellum as opposed to the effects of an extremely large ovarian cyst:
4. List six possible systemic effects of neoplasms:
 - a.
 - b.
 - c.
 - d.
 - e.
 - f.
5. List five points which should be considered when drugs are required for the relief of pain in the individual with metastatic cancer:
 - a.
 - b.
 - c.
 - d.
 - e.

WEEK V, Tape 3

6. Briefly discuss some of the aspects involved in the question of whether or not to tell the patient that he has cancer:

WEEK V, Tape 4

7. List four skills that the nurse must possess in order to adequately care for the patient with cancer:
 - a.
 - b.
 - c.
 - d.
8. Distinguish between primary and secondary prevention in the control of cancer:
 - a. Primary prevention:
 - b. Secondary prevention:
9. Briefly state the significance of adequate examination of the following systems or structure in cancer detection examinations:
 - a. skin;
 - b. superficial lymph nodes:
 - c. lung:
 - d. colon:

10. List four ways in which tissue may be obtained for microscopic examination:
- a.
 - b.
 - c.
 - d.

WEEK V, Tape 5.

11. Distinguish between neoplasms of Grade I and neoplasms of Grade IV:
- a. Grade I:
 - b. Grade IV:
12. List the seven danger signals which may indicate cancer, published by the American Cancer Society:
- a.
 - b.
 - c.
 - d.
 - e.
 - f.
 - g.
13. List five uses of chemotherapy for cancer as presented by Crile:
- a.
 - b.
 - c.
 - d.
 - e.
14. Briefly discuss the toxic effects frequently seen in the patient receiving antineoplastic drugs:

WEEK V, Tape 6

15. List the six major hormones produced by the anterior lobe of the pituitary (adenohypophysis) and the general function of each:
- | | |
|----|----|
| a. | d. |
| b. | e. |
| c. | f. |
16. List the three classifications of hormones produced by the adrenal cortex and the general functions of each:
- a.
 - b.
 - c.

WEEK VI, Tape 1

1. List five biochemical reactions that are catalyzed by enzymes in the human organism:
 - a.
 - b.
 - c.
 - d.
 - e.
2. List the three general types of hormones (based on chemical structure) and give two examples of each:
 - a.
 - b.
 - c.
3. List six common characteristics shared by hormones:
 - a.
 - b.
 - c.
 - d.
 - e.
 - f.

WEEK VI, Tape 2

4. List ten of the signs and symptoms seen in the individual with hypo-function of the anterior lobe of the pituitary (adenohypophysis):
 - a.
 - b.
 - c.
 - d.
 - e.
 - f.
 - g.
 - h.
 - i.
 - j.
5. Why must endocrine therapy be used before, during, and almost always permanently after surgical removal or X-ray irradiation of a pituitary tumor?
6. List three secondary hormonal changes that may take place in long-standing hyperpituitarism:
 - a.
 - b.
 - c.Explain the mechanism by which these hormonal changes take place:

WEEK VI, Tape 3

7. List the two most common symptoms associated with diabetes insipidus:
 - a.
 - b..

8. Explain how the specific gravity of a particular fluid is measured:
9. Why is Vasopressin tannate (Pitressin Tannate) in oil more commonly used in the treatment of diabetes insipidus than aqueous vasopressin injection?
10. What is the name of the stored form of the thyroid hormone and of what two substances is it composed?
Name:
Composition:
11. List seven laboratory tests which are commonly used in the diagnosis of thyroid dysfunction:

a.	d.	g.
b.	e.	
c.	f.	

WEEK VI, Tape 4

12. List the most common symptoms seen in the individual with simple goiter:
13. How can the development of a simple goiter be prevented?
14. List four causes of primary myxedema (hypothyroidism) in the adult:

a.
b.
c.
d.
15. List ten signs and symptoms commonly seen in the individual with longstanding hypothyroidism:

a.	f.
b.	g.
c.	h.
d.	i.
e.	j.
16. What is one of the most common causes of cardiac complications in the myxedematous individual?

WEEK VI, Tape 5

17. Describe the individual with thyrotoxicosis:
18. Discuss the advantages and disadvantages of Propylthiouracil and iodine therapy in preparation for a subtotal thyroidectomy:

19. Discuss the advantages and disadvantages of radioactive iodine I ¹³¹ in the treatment of hyperthyroidism:

WEEK VI, Tape 6

20. List three symptoms or finding in the individual with possible carcinoma of the thyroid gland:
a.
b.
c.
21. What is the most common form of thyroiditis and in which sex and age group is it principally seem?

WEEK VII, Tape 1

1. List 8 symptoms and signs common in the individual with hypoparathyroidism:
a. e.
b. f.
c. g.
d. h.
2. Define the following terms:
a. Shvostek's sign-
b. Trousseau's phenomenon-
3. List three aspects of the maintenance treatment employed in the individual with hypoparathyroidism:
a.
b.
c.
4. List 3 symptoms or signs commonly seen in the individual with urinary tract manifestations of hyperparathyroidism:
a.
b.
c.
5. List 3 aspects of treatment of the individual with hypercalcemia:
a.
b.
c.

WEEK VII, Tape 2

6. Describe the activity of the anabolic (sex steroid) hormones:
7. Describe the activity of the antianabolic of catabolic (glucocorticoid) hormones:
8. Electrolyte-Regulating (Mineralocorticoid) hormones:
9. List 4 situations which may precipitate acute adrenal insufficiency:
 - a.
 - b.
 - c.
 - d.
10. List five signs or symptoms commonly seen in the individual with acute adrenal insufficiency:
 - a.
 - b.
 - c.
 - d.
 - e.
11. List 6 signs or symptoms commonly seen in the individual with Addison's disease:
 - a.
 - b.
 - c.
 - d.
 - e.
 - f.

WEEK VII, Tape 3

12. List 8 signs or symptoms commonly seen in the individual with Cushing's syndrome:
 - a.
 - b.
 - c.
 - d.
 - e.
 - f.
 - g.
 - h.
 - i.
13. List 4 tests commonly used in the diagnosis of a pheochromocytoma:
 - a.
 - b.
 - c.
 - d.

WEEK VII, Tape 4

14. List five principles which are specific to an adequate understanding of the nervous system:
 - a.
 - b.
 - c.
 - d.
 - e.
15. Differentiate between the following terms:
 - a. Afferent processes-
 - b. Efferent processes-

WEEK VII, Tape 5

16. Describe the function of the thalamus:
17. Describe the symptoms exhibited by the individual with cerebellar dysfunction:

WEEK VII, Tape 6

18. List 6 signs or symptoms commonly seen in the individual with increased intracranial pressure:
 - a.
 - b.
 - c.
 - d.
 - e.
 - f.
19. List 8 relatively common causes of coma (extra cranial causes):

a.	e.
b.	f.
c.	g.
d.	h.

WEEK VIII, Tape 1

1. List five observations that should be made for the patient with neurologic involvement:
 - a.
 - b.
 - c.
 - d.
 - e.

2. Define the following terms:
 - a. Subdural hematoma-
 - b. Extradural hemorrhage-
 - c. Subarachnoid hemorrhage-
3. Describe the signs and/or symptoms you would expect to see in the patient with an intracranial tumor of the following areas:
 - a. Occipital lobe tumor-
 - b. Frontal lobe tumor-
 - c. Cerebellar tumor-

WEEK VIII, Tape 2

4. Describe the appearance of the individual immediately following a severe CVA:

WEEK VIII, Tape 3

5. Outline the characteristic symptoms of the following types of epilepsy
 - a. Grand mal-
 - b. Petit mal-
 - c. Jacksonian-
6. Briefly discuss the drug therapy used in the various types of epileptic seizures:

WEEK VIII, Tape 4

7. Discuss the following aspects of multiple sclerosis:
 - a. Onset-
 - b. Symptoms-
 - c. Treatment-
 - d. Prognosis-

WEEK VIII, Tape 5

8. Discuss the treatment of the individual with migraine headaches:

APPENDIX VII

STUDENT'S FINAL EVALUATION QUESTIONNAIRE

Name _____ Social Security No. _____

To which group were you assigned?

_____ Traditional
Classroom Lecture

_____ Research
Taped Lectures and
Small Group Sessions

To which group would you have preferred being assigned?

_____ Traditional

_____ Research

If you selected Traditional, go to Question I.

If you selected Research, go to Question A.

Rank the following in the order of their importance to you in your choice of

Traditional group: 1=highest; 2=2nd highest; 0= did not enter your decision.

You preferred the Traditional because there was:

RANK

- _____ I. Greater freedom of exploration than in taped lectures.
- _____ II. More structured class scheduling.
- _____ III. More personalized teaching than in taped lecture and small group sessions.
- _____ IV. More attention given to personal problem areas.
- _____ V. A disproportional amount of time demanded by the workbook.
- _____ VI. A poor quality of instruction on tapes.
- _____ VII. An advantage to having personal contact with the lead instructor.
- _____ VIII. Too much mechanical difficulty with the taped lectures.
- _____ IX. Difficulty allotting time for independent study.
- _____ X. Greater security in "tried and true" methods of education.
- _____ XI. Greater academic achievement (higher grades) among those enrolled in the traditional group.

YOUR COMMENTS:

Rank the following in the order of their importance to you in your choice of Research group. 1=highest; 2=highest; 0=did not enter your decision. You preferred the Research because there was:

RANK

- _____ A. Greater freedom to explore than in the traditional lectures.
- _____ B. Less structured class scheduling.
- _____ C. More personalized teaching than in the traditional classroom lecture.

- ☐ D. More attention given to problem areas.
- ☐ E. The workbook proved an aid to learning.
- ☐ F. The tapes allowed for evaluation of comprehension before class discussion sessions.
- ☐ G. Ease in personalizing the lead instructor even on tapes.
- ☐ H. Opportunity to replay tapes that were more difficult outweighed the mechanical problems encountered periodically.
- ☐ I. An opportunity to select free hours for listening.
- ☐ J. A spirit of adventure in trying a new approach to teaching.
- ☐ K. Greater academic achievement (higher grades) among those enrolled in the research group.

YOUR COMMENTS:

APPENDIX VIII

STUDENT RESPONSE TO PROJECT

At the end of the course students in both groups were asked to complete the questionnaire to record reactions to the experience to which they had been assigned.

Freshman Traditional Group

Four highest rankings by the class on questions

- I. - XI.
Traditional was more desirable than the Research approach because
- I. Greater freedom of exploration than in taped lecture
- VII. Advantage of having personal contact with lead instructor
- III. More personalized teaching.
- IV. More attention given to personal problems

Two lowest rankings

- V. Disproportionate amount of time demanded by workbook
- VI. Poor quality of instruction on tapes.

Traditional Group who would have preferred the Research Group (4 students)

Four highest rankings

- H. Opportunity to replay tapes
- B. Less structured class schedule
- E. Workbook proved an aid to learning
- F. Tapes allowed for evaluation of comprehension before class discussion sessions.

Freshman Research Group

Four highest rankings by the class on questions

- A. - K.
Research was more desirable than Traditional approach because
- H. Opportunity to replay tapes
- D. More attention given to personal problems
- I. Opportunity to select free hours for listening
- G. Ease of personalizing lead instructor

Two lowest rankings

- K. Greater academic achievement among those enrolled in the research group
- J. A spirit of adventure in trying new approach to teaching

Research Group who would have preferred the Traditional Approaches (4 students)

Two highest reasons given

- VIII. Too much mechanical difficulties with taped lectures
- II. More structured class scheduling

Sophomores: Traditional Group

Four highest rankings by the class on questions

I. - XI.

VII. An advantage to having personal contact with lead instructor

I. Greater freedom to explore than in tapes lectures

III. More personalized teaching than in taped lectures

VIII. Too much mechanical difficulty with taped lectures

Two lowest rankings

II. More structured class scheduling

IV. More attention to personal problem areas

No students from the Traditional Group indicated a preference for experience in the Research Group.

Research Group

Four highest rankings by the class on questions

A. - K.

A. Greater freedom to explore than in traditional lectures

C. More personalized teaching than in traditional lectures

H. Opportunity to replay tapes

F. Tapes allowed for evaluation of comprehension before class discussion.

Two lowest rankings

B. Less structured class scheduling

G. Ease in personalizing the lead instructor even on tapes.

Research Group who would have preferred the Traditional Approach (4 students)

Two highest reasons given

VIII. Too much mechanical difficulty

IX. Difficulty of allotting time for independent study.

APPENDIX IX

PREPARATION OF THE PROJECT PROGRAM MATERIALS

Syllabi, Behavioral Objectives

To provide for the formal dissemination of content relative to the course work, taped lectures were prepared. However, prior to the preparation of these tapes the area specialists prepared the syllabi for the courses of Fundamentals of Nursing and Medical-Surgical Nursing. The content areas included:

1. Course overview and expected behaviors
2. Topic of the week
3. Vocabulary list relative to the topic
4. Assigned readings
5. Suggested films
6. Laboratory assignments

The next task which was undertaken by the respective area specialists was the formulation of the expected behavioral objectives for each unit of the two courses. These behavioral objectives were circulated for review and revision to the faculty members involved in the courses.

Tape Preparation

Structured information-giving activities were developed in the form of lecture notes in preparation for the taping of the lecture materials. Film strips were identified and included in the instructional program to embellish the presentation of specific tapes.

Film strips were reviewed and evaluated by the faculty before inclusion.

Consultation with media specialists gave the investigators the necessary technical skill to prepare the lecture tapes. The two area specialists responsible for the preparation of the tapes had varying familiarity with the equipment available such as tape recorders, film projectors.

Factors which were clarified by media specialists and especially helpful for the two area specialists were:

1. Sensitivity of the recorders to sounds from the environment (including methods to reduce undesirable sounds).
2. Method of delivering material: If errors occur, the tendency is to correct them by erasing and re-recording. The area specialist were advised to leave these in place and record the correction immediately. A tape tends to reduce the alertness of the students.

3. Length of each segment of the tape block: Basically only one sense is being employed by the student listening to the tape block. Because of this limitation the attention span is somewhat shorter than in the classroom lecture setting where the sense of sight is employed as an additive stimulus to the preparation of the tapes students had been asked to record the exact time during each nursing lecture period at which they first glanced at their watches. This was interpreted to be the point at which the individual's attention to the presentation began to wane. The data collected in this attention sampling indicated a variation from forty-eight minutes to twenty-two minutes. Based on this information the area specialists elected to adopt twenty minutes as the desired length for each listening tape. (A Tape Block).

Before preparation of the tapes began, the voices of the instructors were recorded and corrections in the recorder were made for tone quality, intensity and echo sounds. During the early period of taping the investigators found that it required approximately sixty minutes to execute twenty minutes of satisfactory lecture material. When the area specialists acquired greater facility with equipment and delivery techniques they found they could complete a satisfactory twenty minute tape block within thirty minutes.

The tape blocks were prepared on "release-time" during the summer months. In this way the tape blocks were prepared under very favorable conditions. The area specialists were not under great pressure and there was adequate time for re-evaluation. In addition, empty offices on quiet corridors were used as taping rooms. The problem interruptions such as telephone ringing and unexpected visitors mentioned by other experimenters were avoided. Through planning a realistic calendar, the area specialists were able to complete all of the required materials before students arrived for the fall semester.

It was also discovered that generally the style of delivery became more closely related to the normal classroom behavior of the individual as the area specialists became more acclimated to this new role. The instructors in this program concluded that the arrangement of furniture could have significant effect on the style of delivery.

Upon completion of each tape blocks a notation of the length of time, in minutes, for the presentation was made on the area specialists lecture notes. Each tape reel was identified by course, the week in the program and its position in the series of tapes for the week. This practice identified the materials included on each tape block and allowed for the summation of the total minutes of listening for the week's tapes. The master tapes were then delivered to the media center where copies were made and cataloged.

A schedule of tapes necessary for each week of the courses was developed and sent to the Independent Study Center of the college. The Independent Study Center had 32 dial access listening stations. The student using this facility indicated his intent to listen to the tapes in a given course by signing his name and entry time on an appropriate class list. He was given ear phones and assigned a booth. He dialed the program he desired. Upon completing his work he returned the ear phones and indicated his departure time on the class list.

Tests, Examinations, Workbooks

It should be noted here that the tests and examination necessary to the course were not prepared until all of the course materials including the tapes had been completed. By constructing the evaluative exercises after completing the instructional material, the investigators assumed that there would be less tendency to "teach the test." Unit and terminal behavioral objectives were employed to determine the contents of the mid-term and final examinations.

Although construction of evaluative tools was delayed until the completion of other program materials, the workbook for each course was developed immediately following the completion of each tape block. The workbook focused on the expected behaviors within a unit. Some questions required the listing of items while others required discussion or evaluation of concepts. No effort was made to examine the workbook of each student. The workbook was designed as a tool to aid in self-evaluation.

APPENDIX X.

IMPLEMENTATION OF THE PROJECT

PROGRAM FOR CONTROL GROUP

The control groups were to follow the instructional pattern of the theory classes employed over the previous two years of the A.D.N. program (hereinafter referred to as the traditional method), and described earlier in this study.

During this project all enrollees were given a pretest in nursing appropriate to the specific course in which he was engaged.

PROGRAM FOR THE RESEARCH GROUP

The research groups were to follow the pattern of the theory classes described below:

During the registration period for the fall semester, each student was assigned to one of the several Small Group Session. Each S.G.S. represented one-half of the required hours for the theory credit hours.

During the first week of classes (in which no clinical laboratory hours were assigned, along with the nursing pretest, students in the research group were assigned to orientation classes in which the procedures of this approach were explained. Specifics of these classes are outlined below:

- I. Overview of the theory classes
 - A. Syllabi distributed and explained
 - B. Expected behavioral outcomes distributed and explained
- II. Individual Study Center
 - A. Procedure for admission to the center explained and demonstrated
 - B. Explanation and demonstration of use of listening station.
 - C. Hours of availability of individual study center explained.
- III. Workbook
 - A. Use of this book: to reevaluate understandings from each tape.
 - B. Independent study, and not to be graded
- IV. Expected behavior's for each unit, relationship of these to workbook explained

V. Evaluation procedures

- A. Mid-term and final examination dates noted.
- B. Quizzes (10 min.) given at any class period. One to four lowest grades to be discarded - total quiz scores to equal one-half of mid-term examination.
- C. Evaluation values in final therapy grade
 - Small tests = 12 per cent
 - Mid-Term Exam = 24 per cent
 - Final Exam = 24 per cent
 - Clinical Laboratory Grade = 40 per cent

These items were explained by the area specialist who had prepared the tape blocks. To eliminate an additional variable, the area specialist who prepared the tape blocks did not meet in S.G.S.'s with the research groups. The area specialist gave the lecture series to the control group. It was agreed that this approach gave the greatest safeguards to the uniformity of lecture materials and the emphasis upon certain areas. It also prevented one or more S.G.S.'s seeming to receive a double stress upon selected areas, especially those representing primary emphasis points to the individual area specialist.

ASSIGNMENT FOR THE FACULTY

Instructors were furnished the following items:

- 1. The course syllabus
- 2. The course workbook
- 3. The notes used by the instructor in the preparation of the tape blocks. These were marked to indicate the materials covered on each tape block and the number of minutes of each tape block and the total minutes of taped material for the entire week.
- 4. List of names of students in assigned S.G.S.
- 5. List of names of students in assigned clinical laboratory sections.

The weekly tape blocks were made available to the faculty during the week preceeding the use by students. The area specialist who had taped the materials was available to the S.G.S. instructors to clarify the lecture notes or materials in the workbook. Little clarification was requested during the extent of the course.

Weekly staff meetings were held, jointly between the instructors of both courses to discuss problems arising from the research approach and to evaluate class progress and morale in general.

Evaluation of the progress of individual students in the clinical laboratory was open to discussion at any staff meeting. However, an effort was made not to introduce progress or lack of progress in the theory aspect of the courses into these discussions. Only the area specialist responsible for preparing the tape blocks met with the traditional lecture group in the classroom setting.

ASSIGNMENT FOR THE AREA SPECIALISTS

The area specialist in each course was the individual who had prepared the taped materials for the course. These individuals, using the lecture notes employed for the taping sessions, met with the students enrolled in the traditional approach. This group did not receive the course workbook. They received the expected behaviors for each unit of the course although no explanation was made to this group of students.

The total number of minutes of listening time for each student in the research group was recorded by clerical personnel. The records were entered on a weekly basis. These figures were not released to the faculty unless specific inquiries were made.

The recording of the listening-minutes by clerical personnel was adopted to reduce the bias which such information might arouse within an instructor. However, the information was available to instructors once academic deficiencies were evident.

The area specialists were responsible for maintaining the theory grade on all students enrolled in the course. The responsibility for establishing the method of interpreting the course theory grades was assigned to the area specialist also. Total course grades were determined through consultation of the clinical instructor and the area specialist.

Appendix XI

MECHANICAL PROBLEMS OF IMPLEMENTATION

Problem arising in the Central Lecture Series approach during the project:

1. Mechanical Problems with the Dial Access Delivery System

Mechanical breakdown of the Dial Access Delivery System on several occasions throughout the project necessitated the use of individual tape recorders in the listening stations of the Individual Study Center. The limited number of tape recorders available caused students long delay in completing the listening assignments.

2. Limitations of the Dial Access Delivery System

In this system the student is unable to reverse the tape to recall areas that might be unclear due to distractions or misunderstandings. Therefore, the correction of these omissions required the listener to continue through the entire tape and to review the portion of the tape which preceded his problem area. Students quickly discovered the advantage of using individual tape recorders. Many prepared personal copies of tapes from the Dial Access Delivery System for use on their own recorders.

3. Inaccurate recording of listening minutes

Early in the project some students failed to sign out when leaving the Individual Study Center, so that the record indicated only his presence in the area. This problem was more common among the freshman group than the sophomore class. Some students recorded copies of tapes for use away from the Individual Study Center. No estimate was made on the number of listening minutes involved in these cases except the original "listening minutes" employed for the recording of personal tapes.

APPENDIX XII

CONCLUSIONS AND RECOMMENDATIONS

GENERAL OBSERVATIONS

The investigators, together with the faculty, observed some advantages of the Central Lecture Series which are not revealed in the statistical analysis.

1. Students with poor success predictions, such as ACT scores below 12 and remedial studies for one year with grades of "B" or less, recorded the highest listening minutes of the project. These students attained a final theory grade of "C" or better.

The next semester (when the entire class entered the traditional approach) only 2 of the 8 identified students were able to attain a "D" or better grade. One of the two received a grade of "C". The remaining six received grades of "F".

2. Inexperienced instructors reported that they undertook the responsibilities for S.G.S.'s with minimal anxieties. They reported listening to approximately fifty per cent of the taped materials and completing one hundred per cent of the workbook prior to meeting with S.G.S.'s. All reported that they reviewed the expected behaviors prior to entering the S.G.S.'s.

3. The two area specialists agreed that the lesson preparation was much more carefully executed for this year than it had been done in previous years. The cause, it was agreed, was the necessity to condense and organize material for taping rather than the distribution to the faculty of lecture notes. Both sensed an improvement in the delivery was considered to be advantageous by both area specialists.

4. Students utilized the Individual Study Center at all the hours it was available - 7:30 A.M. to 9:00 P.M. However, while students commented favorably upon the freedom of repeated listenings and hours of availability, none commented on the lesser demands of his time during the regular school hours.